EPA REGISTRATION NUMBER 19713-668

PROCESSING REQUEST

Reg #: 19713-668 **Decision #:** 500368

Description: New Registration

Material Available Electronically (see PPLS):

☒ Electronic Label/Letter Dated: 7/1/15

☐ Other:

Material Sent (see jacket):

☐ Stamped Label/Letter Dated:

☐ Notification Dated:

☒ New CSF(s) Dated: 2/23/15

☐ Other:

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Mindy Ondish

Division: RD

Phone: 605-0723 **Date:** 7/9/15

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
19713-668	7/1/15

Term of Issuance:
Conditional

Name of Pesticide Product:
Pin-Dee 3.3 EC

Name and Address of Registrant (include ZIP Code):

Luz Chan
Registration Manager
Drexel Chemical Company
P.O. Box 13327
Memphis, TN 38113-0327

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Continued on page 2

Signature of Approving Official:

Beth Benbow for

Reuben Baris, Product Manager 25
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

Date:
7/1/15

EPA Form 8570-6

2. You are required to comply with the data requirements described in the DCI identified below:

    a. Pendimethalin GDCI-108501-1267

    You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: http://www.epa.gov/oppsrrd1/contacts_prd.htm

3. Submit one copy of the final printed label for the record before you release the product for shipment. Assure that the EPA establishment number and net contents are added to the final printed label. Also assure that a batch code is included for all non-refillable containers of this product.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 02/23/2015
- Alternate CSF dated 02/23/2015

If you have any questions, please contact Mindy Ondish by phone at 703-605-0723, or via email at ondish.mindy@epa.gov.

Enclosure

GROUP 3 HERBICIDE

Pin-Dee™ 3.3 EC

Herbicide

For use on Bearing Citrus Fruit Trees, Bearing Nut Trees, Bearing Pome Fruit Trees, Bearing Stone Fruit Trees, Carrots, Carrots Grown For Seed, Corn (Field, Pop, Seed, Sweet), Cotton, Edible Beans, Forage Legumes, Fruiting Vegetables (Pepper, Tomatoes), Garlic, Grain Sorghum, Juneberry, Leek, Lentils, Mint, Nonbearing Fruit Tree and Nut Trees, Nonbearing Vineyards, Onions (Dry, Bulb, Green), Peas, Pomegranate, Shallots, Peanuts, Potatoes, Rice, Soybeans, Strawberries, Sugarcane, Sunflowers, Tobacco, Wheat.

ACTIVE INGREDIENT:	
Pendimethalin	37.4%
OTHER INGREDIENTS*:	62.6%
TOTAL:	100.0%

This product contains 3.3 pounds of pendimethalin per gallon.
* Contains petroleum distillate.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See FIRST AID Below

EPA Reg. No. 19713-668
EPA Est. No. 19713-XX-X **Net Content:** _____

FIRST AID
IF SWALLOWED: • Immediately call a poison control center or doctor for treatment advice. • Do not give any liquid to person. • Do not induce vomiting unless told to by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF IN EYES: • Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING: • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also call CHEMTREC at 800-424-9300 for emergency.
NOTE TO PHYSICIAN: Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

Manufactured By:

Drexel Chemical Company
P.O. BOX 13327, MEMPHIS, TN 38113-0327
SINCE 1972

Pin-DeeSP-0615*P

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE CLOTHING (PPE)

Applicators and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils or viton ≥ 14 mils and shoes plus socks.
Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CPR 170.240)(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should: 1) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 2) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters or rinsate.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide protection.

This label must be in the possession of the user at the time of pesticide application. Observe all precautions and restrictions this label and the labels of products used in combination with this product. The use of this product not consistent with this label can result in injury to crops, animals, or persons.

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands or animals.

Do not enter or allow other people (or pets) to enter the treated area until sprays have dried.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE), notification to workers and Restricted Entry Interval (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.
Do not enter or allow worker entry to treated areas during the REI of 24 hours.
Exception: If the product is soil-injected or soil-incorporated, the WPS, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated. PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated such as plants, soil or water is: Coveralls, chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils or viton ≥ 14 mils and shoes plus socks.

PRODUCT INFORMATION

PIN-DEE 3.3 EC is a selective herbicide for controlling most annual grasses and certain broadleaf weeds as they germinate. This product will not control established weeds. Destroy emerged weeds prior to application.

This product is most effective in controlling weeds mechanically incorporated or when incorporated into the weed germination zone by adequate rainfall or overhead irrigation after application.

Unusually cold, excessively wet or hot and dry conditions that delay germination or extend germination over a long period of time can reduce weed control.

Uneven application or improper soil incorporation can decrease weed control or cause crop injury. Soil incorporation deeper than directed can reduce weed control. Seedling diseases, cold weather, excessive moisture, shallow or deep planting, low or high soil pH, high soil salt concentration or drought can weaken seedlings and plants and increase the possibility of crop damage from this product. Under these conditions, crop yields can be reduced.

In the event of crop loss due to adverse weather conditions or other reasons, any crop registered for a pre-plant incorporated application of this product can be replanted without adverse effects the same year (see *"CROPS"* section for exceptions).

ENDANGERED SPECIES PROTECTION

This product may have effects on federally listed threatened or endangered plant species or their critical habitat. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county or parish in which you are applying the pesticide. To determine whether your country or parish has a bulletin, and to obtain that bulletin, consult http://www.epa.gov/espp/ or call 1-800-447-3813 no more than 6 months before using this product. Applicators must use bulletins that are in effect in the month in which the pesticide will be applied. New bulletins will generally be available from the above sources 6 months prior to their effective dates.

If endangered plant species occur in proximity to the application site, the following mitigation measures are required:

- If applied by ground, leave an untreated buffer zone of 200 feet. The product must be applied using a low boom (20 inches above the ground) and ASABE fine to medium/coarse nozzles.
- If applied by air, leave an untreated buffer zone of 170 feet. Must use straight-stream nozzles (D-6 or larger). Wind can be no more than 8 mph and release height must be 15 feet or less.

RESISTANCE MANAGEMENT

GROUP	3	HERBICIDE

This product is a Group 3 herbicide. It is a meristematic inhibitor that interferes with the plant's cellular division or mitosis. This and/or other products with the meristematic inhibiting mode of action may not effectively control naturally occurring biotypes of some of the weeds listed on this label. A weed biotype is a naturally occurring plant within a given species that has a slightly different, but distinct genetic makeup from other plants. Other herbicides with the meristematic inhibiting mode of action include other dinitroaniline herbicides such as trifluralin.

Weed species with acquired resistance to Group 3 herbicides may eventually dominate the weed population if Group 3 herbicides are used repeatedly in the same field or in successive years as primary method of control for targeted species. This may result in partial or total loss of control of those species by this product or other Group 3 herbicides. To delay herbicide resistance, consider:

- Avoiding the consecutive use of this product or other target site of action Group 3 herbicides that have a similar target site of action on the same weed species.
- Using tank-mixtures or pre-mixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action and are both effective at the tank-mix or pre-pack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive IPM program.
- Monitoring treated weed populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

WEEDS CONTROLLED

See *"CROPS"* section for additional weeds controlled.

Weeds Controlled By Up to 2.4 Quarts of This Product Per Acre		
Grasses		
Annual ryegrass	Foxtail (Yellow)	Panicum (Fall)
Barnyardgrass	Goosegrass	Panicum (Texas)
Canarygrass*	Hairy chess*	Sandbur (Field)
Cheat*	Itchgrass*	Shattercane*
Crabgrass	Italian ryegrass*	Signalgrass*
Crowfootgrass	Japanese brome*	Wild proso millet*
Downy brome* (Cheatgrass)	Johnsongrass (Seedling)	Witchgrass
Foxtail (Giant)	Jointed goatgrass*	Wooly cupgrass*
Foxtail (Green)	Oat (Wild)*	
Broadleaves		
Amaranth (Palmer)	Lambsquartres (Common)	Shepherdspurse*
Bugloss (Small)	Lambsquarters (Slimleaf)	Smartweed (Pennsylvania)*
Carpetweed	London rocket*	Spurge (annual)
Chickweed (Common)*	Mustard (Black)	Velvetleaf*
Henbit	Pigweed spp.	Waterhemp spp.
Kochia	Purslane	
Lady's thumb	Pusley (Florida)	
*Suppression but controlled when use rate of this product is greater than 2.4 quarts per acre.		

Weeds Controlled By 2.4 Quarts or Greater of This Product Per Acre		
Grasses		
Annual bluegrass	Junglerice	Sprangletop (Red)
Browntop Panicum	Lovegrass	Swollen fingergrass
Guinea grass	Sprangletop (Mexican)	
Broadleaves		
Dodder*	Knotweed (Prostate)	Puncturevine
Fiddleneck	Morningglory**	
*Use the highest labeled rate of this product specified in the specific crop for optimum control of Dodder. **Suppression		

APPLICATION RATE

Use rates for this product when used alone, in tank-mix or sequential applications are given in the *"CROPS"* section. Use rates of this product vary by soil texture and organic matter. See the following table for soil texture groupings used in this label.

Soil Texture	Soil Type
Coarse	Loamy sand, Sand, Sandy loam
Medium	Loam, Sandy clay, Sandy clay loam*, Silt, Silt loam
Fine	Clay, Clay loam, Silty clay, Silty clay loam*
Peat and Muck**	-
*Sometimes considered as transitional soils and may be classified as either medium or fine textured soil. **This product may be used on peat and muck soils but weed control may be inconsistent and/or reduced. Use maximum labeled use rate allowed in the specific crop.	

TIMING OF APPLICATION

This product will provide most effective weed control when applied by ground or aerial equipment and subsequently incorporated into the soil within 7 days after application by rainfall, sprinkler irrigation or mechanical tillage prior to weed seedling emergence from soil. This product can also be applied through chemigation including flooded basin irrigation systems. Apply this product as pre-plant surface, pre-plant incorporated, surface incorporated, pre-emergence, early post-emergence, post-emergence incorporated (CULTI-SPRAY) or layby treatment. See the *"CROPS"* section for specific application directions by crop.

Pre-plant Surface Applications: Apply this product alone or in tank-mixtures up to 45 days before planting in minimum tillage or no-tillage production systems. When making early pre-plant surface applications (15 to 45 days prior to planting), tank-mix this product or follow by a post-emergence herbicide application. Rainfall or sprinkler irrigation within 7 days after application is required to move this product into the upper soil surface where weed seeds germinate.

Pre-plant Incorporated Applications: Apply this product and incorporate into the upper (1 to 2 inches) soil surface up to 60 days before planting. Use an implement capable of giving uniform incorporation. Two-pass incorporation usually results in a more consistent result.

Surface Incorporated Applications: Uniformly apply this product as broadcast or banded treatment to soil surface underneath established trees and/or in ground areas between trees rows. Within 7 days after application, incorporate into upper (1 inch to 2 inches) soil surface using either rainfall, sprinkler irrigation or shallow mechanical incorporation using an implement capable of giving uniform incorporation. Two-pass mechanical incorporation usually results in a more consistent result.

Pre-emergence Surface Applications: Broadcast treatment uniformly to the soil surface at planting and up to 2 days after planting. Rainfall, sprinkler irrigation or shallow mechanical incorporation within 7 days after application is required to move this product into the upper soil surface where weed seeds germinate. If adequate rainfall or irrigation does not occur and weed seedling emergence begins, a shallow cultivation or rotary hoeing will improve performance.

Early Post-emergence Applications: This product must be applied prior to weed seedling emergence or in a tank-mix with products that control the emerged weeds. Refer to the *"CROPS"* section for specific post-emergence application directions by crop.

Post-emergence Incorporated Applications (CULTI-SPRAY): Prior to application, crop must be cultivated in such a manner as to throw at least 1 inch of soil over the base of the crop plants. This will prevent direct contact of this product and the zone of brace root formation. This product must be applied broadcast with a ground sprayer when crop is at least 4 inches tall up to layby. Use drop nozzles if crop foliage will prevent uniform coverage of the soil surface within the rows. Thoroughly and uniformly incorporate treatments of this product into the soil with (1) a sweep-type or rolling cultivator set to provide thorough incorporation in the top 1 inch of soil or (2) adequate overhead irrigation water or rainfall. See *"CORN"* and *"GRAIN SORGHUM"* under the *"CROPS"* section for more details on Culti-Spray application.

Layby Application: Apply this product directly to the soil between rows as a directed spray following the last normal cultivation (layby). See the *"CROPS"* section for more details on layby application.

Split Applications: This product may be applied pre-plant incorporated up to 60 days prior to planting and followed by a pre-emergence application at planting or up to 2 days after planting. The total amount of this product applied per acre per season cannot exceed the highest specified rate for any given soil type. See the *"CROPS"* section for more details on split applications.

Fall Applications: This product may be used in Fall application programs in certain crops. See the *"CROPS"* section for details on Fall application timing.

APPLICATION INSTRUCTIONS

This product may be applied using either water or sprayable fluid fertilizer (such as straight 32-0-0 or 28-0-0) as the spray carrier. Additionally, this product may be impregnated on dry bulk fertilizer. Do not use sprayable fluid fertilizer as a carrier after crop emergence unless the typical fertilizer burn symptoms on the crop are acceptable.

AERIAL APPLICATION

Uniformly apply in 5 or more gallons of water per acre.
Exercise precautions to minimize drift. Do not apply during periods of gusty winds or when wind conditions favor drifting.
Spray drift can cause injury to sensitive crops. Use a flagman or an automatic mechanical flagging unit on the aircraft to avoid overlapping and possible crop injury.

GROUND APPLICATION (BROADCAST)

Uniformly apply with properly calibrated ground equipment in 10 or more gallons of water per acre or 20 or more gallons of liquid fertilizer per acre. Use sprayers equipped with appropriate nozzles that provide uniform and accurate spray distribution and minimize drift. Keep the bypass line on or near the bottom of the tank to minimize foaming. Nozzle and in-line screens must be no finer than 50 mesh. Application of this product during periods of gusty winds may result in uneven applications. Do not apply this product post-emergence in liquid fertilizers.

If liquid fertilizer/herbicide(s) mixture separates in the spray tank, clogged equipment and uneven application can result. Always predetermine the compatibility of this product alone or with other herbicides based on the following compatibility jar test:

1. Add 1 pint of fertilizer to a quart jar.
2. Add 1 to 4 teaspoons of the Dry Flowable (DF), Wettable Powder (WP), Aqueous Solution (SL), Flowable (SC) or Liquid (L) formulation (depending on mixing ratio required) to the liquid fertilizer. The number of teaspoons of the formulation to add can be determined by the following formula:

$$\frac{\text{Lbs. or Pts. of the Product/Acre}}{\text{Gals. of Fertilizer/Acre}} \times 11.4 = \text{No. of Teaspoons of Herbicide to Add to 1 Pint of Fertilizer}$$

3. Close the jar and agitate until the herbicide(s) are evenly dispersed in the liquid fertilizer. If the materials do not disperse well, it may be necessary to slurry the chemicals in water before adding to the fertilizer.
4. After dispersing the materials, add appropriate number of teaspoons of this product to the jar and shake well. Add water soluble concentrate herbicides to the mixture last and agitate. Let the mixture stand for 30 minutes and then observe the results. Look for signs of separation: an oily layer or globules, sludge, flakes or other precipitates.
5. Evaluate compatibility.
   (a) If the herbicide(s) and liquid fertilizer mixture does not separate, use this mixture in your spray tank.
   (b) If the mixture separates but mixes readily with shaking, the mixture can be used provided that good agitation is maintained in the spray tank.
   (c) If separation of the mixture occurs and agitation does not correct this problem, a compatibility agent is needed.
6. If the need for a compatibility agent is demonstrated, the following procedure is recommended: Using a clean quart jar, repeat step 1 above and add one-half teaspoon of the compatibility agent to the liquid fertilizer. Mix well and repeat steps 2, 3 and 4. If separation or precipitation occurs with the compatibility agent, do not use this product with that specific liquid fertilizer.

GROUND APPLICATION (BAND)

Uniformly apply the broadcast equivalent rate and volume per acre. To determine these:

$$\frac{\text{Band width in Inches}}{\text{Row width in Inches}} \times \text{Broadcast Rate per Acre} = \text{Band Rate per Acre}$$

$$\frac{\text{Band width in Inches}}{\text{Row width in Inches}} \times \text{Broadcast Volume per Acre} = \text{Band Volume per Acre}$$

GROUND APPLICATION (DRY BULK FERTILIZER)

Apply this product/dry bulk fertilizer mixtures with ground equipment only. **Do not** impregnate this product onto coated ammonium nitrate or limestone because these materials will not absorb the herbicide. Dry fertilizer blends containing mixtures of ammonium nitrate or limestone may be impregnated with this product. A minimum of 200 pounds of impregnated dry bulk fertilizer excluding the weight of ammonium nitrate or limestone must be applied per acre.

Use the following formula to determine the amount of this product (in quarts) to be impregnated on a ton of dry bulk fertilizer based on the rate of fertilizer to be applied per acre:

$$\frac{2000}{\text{Lbs. of Dry Fertilizer}} \times \text{Quarts of This Product (Specified Rate per Acre)} = \text{Quarts of This Product per Ton of Fertilizer}$$

To impregnate this product on bulk fertilizer, use a closed rotary drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Spray nozzles must be placed to provide uniform coverage of this product onto the fertilizer during mixing.

Apply this product/dry bulk fertilizer mixture with an accurately calibrated dry fertilizer spreader. This product/dry bulk fertilizer mixture must be spread uniformly on the soil surface.

CHEMIGATION APPLICATION (VIA SPRINKLER IRRIGATION SYSTEMS)

This product may be applied as a chemigation treatment through sprinkler irrigation systems. Refer to *"CROPS"* section for individual crops.

Do not apply this product via chemigation to crops unless specified in the *"CROPS"* section.

Apply this product ONLY through a sprinkler irrigation system of the following type: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move. Do not apply this product through any other type of sprinkler irrigation system.

Uniform distribution of irrigation water treated with this product is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness or illegal pesticide residues in the crop. If you have any questions about calibration, contact your state extension service specialists, equipment manufacturers or other experts.
The system must be properly calibrated (with water only) to ensure that the amount of this product applied corresponds to the specified rate. Apply this product in one-half to three-fourths inches of water during the first sprinkler set (use at least 1 inch of water in the states of New Mexico, Oklahoma and Texas). Maintain agitation in the injection nurse tank to keep a uniform herbicide suspension during application. When application is complete, flush the system with water.

Instructions for Low Volume Micro Sprinklers

Output of low volume sprinkler equals 4 to 50 gallons per hour (gph) per emitter. Point of application must be above ground. Irrigation system should run a sufficient amount of time prior to injection of this product to have all emitters functioning properly. After system is operating properly, length of injection should be such that at one period of time during the injection, the first and last emitters in the system contain water treated with this product. Add this product to the supply tank already filled with the volume of water required for the injection period. Maintain proper agitation in the injection tank containing this product. Mix this product in clean water and inject down-line from filters. Following injection of this product, flush the system for a period of time sufficient to clear the line of this product. (If application of this product is made during a normal irrigation cycle, make the injection during the last stage.)

Calibration of Low Volume Micro Sprinklers

Calculation of use rate is based on wetted area around emitters, **not** on tree acres. To determine the correct amount of this product, use the following formula:

1. Treated area per each emitter = A
   A = 3.14 x (radius x radius)
2. The area in square feet wet in each acre = B
   $B = \frac{A \times \text{Emitters/Acre}}{144}$
3. The total area (sq. ft.) wet by your system = C
   C = B x Acres covered by system
4. Rate per treated acre of this product (based on length of control desired) = R

Amount of This Product to Inject (S) = $\frac{C}{43{,}560} \times R$ = Quarts of This Product

Example:

If the average distance from emitter to perimeter of wetted area measured 1 inch below soil surface is 13 inches, then:

A = 3.14 x (13" x 13") and A = 530.7 sq. in.

If there are 300 emitters per acre, then:

$B = \frac{530.7 \times 300}{144}$ and B = 1105.6 sq. ft. wetted per acre

If the system covers 20 acres, then:

C = 1105.6 sq. ft. x 20 acres and C = 22,112 sq. ft. wetted by the system

If the desired application rate per treated acre is 2.4 quarts of this product, then:

$S = \frac{22{,}112}{43{,}560} \times 2.4$ and S = 1.2 quarts of this product have to be injected into the system

Special Restrictions For Chemigation

1. Do not apply when wind speed favors drift beyond the area intended for treatment.
2. Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
3. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
4. The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump. It must also contain a functional, normally closed solenoid-operated valve located on the

intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

5. The sprinkler chemigation system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. In addition, systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
6. The sprinkler chemigation system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
7. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Chemigation Systems Connected to Public Water Systems

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. All chemigation systems connected to public water systems must also follow restrictions listed in the preceding section *"Special Restrictions for Chemigation".*

CHEMIGATION APPLICATION (VIA FLOODED BASIN IRRIGATION SYSTEMS)

This product may be applied via flooded basin irrigation systems, but only to the following crops: Bearing and Nonbearing Fruit and Nut trees and Nonbearing vineyards.

Use Instructions and Restrictions for Flooded Basin Irrigation

1. This product may be applied through flooded basin irrigation systems designed to uniformly distribute irrigation water along the soil surface. Solid set systems utilizing tall riser for overhead application are excluded.
2. Follow all label directions for this product regarding rates per acre, timing of application and crop specific use restrictions.
3. Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
4. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person shall shut the system down and make necessary adjustments should the need arise.
5. Mix this product with water at a 1:1 ratio in the injection nurse tank to assist with product flowability. Maintain agitation in the injection nurse tank to keep a uniform herbicide suspension during application. When application is complete, flush the system with water.
6. Recirculate tail water (runoff water) from flood irrigation that contains this product and contain in the field of initial application or use only on adjacent tree or vine crops for which this product is registered for this type of application.
7. Systems using a gravity-flow pesticide dispensing system must meter the pesticide in the water at the head of the field downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow water.
8. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
   - The system must contain a functional check valve, vacuum-relief valve and low-pressure drain appropriately located in the irrigation pipe to prevent water source contamination from backflow.
   - The pesticide injection pipeline must contain a functional automatic quick closing check valve to prevent flow of fluids back towards the injection pump.
   - The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
   - The system must contain a functional interlocking control to automatically shut off the pesticide injection pump when the water pump stops.
   - The irrigation pipe or water pump must include a functional pressure switch, which will stop the pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
   - Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) of effective design and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
   - Any alternative to the above safety devices must conform to the list of EPA-approved alternative devices.
9. Be sure to regularly measure the flow in the field to ensure the correct amount of this product is being metered into the irrigation water and also regularly monitor to ensure that treated water is being uniformly distributed across the field. Flow rates through metering devices and distribution of this product can vary with water temperature and speed of water flow across the field.

10. Uniform distribution of irrigation water treated with this product is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness, or illegal pesticide residues in the crop.
11. If you have questions about calibration, contact your state extension service specialists, equipment manufacturers or other experts.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator and grower are responsible for considering all these factors when making decisions. It is the responsibility of the applicator to avoid spray drift onto non-target areas.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops:

1. The distance of the outermost nozzles on the boom must not exceed three-fourths the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the following spray drift reduction advisory information.

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see *"Wind"*, *"Temperature and Humidity"* and *"Temperature Inversions"*).

Controlling Droplet Size

Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When high flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.

Nozzle Orientation - Orienting nozzles so that the spray released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles. Solid or straight-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length

For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

When applications are made with crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions
Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog. However, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas
This pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species or non-target crops or plants) is minimal (e.g., when wind is blowing away from the sensitive areas).

ADDITIVES
Spray adjuvants have little or no influence on performance of this product when applications are made prior to weed emergence. However, several tank-mixes with this product require adjuvants to improve burndown of emerged weeds. Therefore, surfactants, liquid fertilizer (28%, 30% or 32% UAN (urea ammonium nitrate) or ammonium sulfate) or crop oil concentrate may be used with this product tank mixed applied pre-plant, pre-emergence or early post-emergence to the crop. Follow the adjuvant directions for use on the label of the tank-mix partner.

TANK-MIXING INFORMATION
This product may be applied in a tank-mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to this product.
When using tank-mixtures or sequential applications with this product, always read the companion product label(s) to determine the specific use rate by soil types, weed species and weed or crop growth stage. In addition, follow all use precautions and restrictions including state and local use restrictions that may apply to specific product(s). Always follow the most restrictive label.

Tank-Mixture With Other Product(s)
If this product is used in combination with any other product(s) except as specifically directed in writing by Manufacturer, then Manufacturer shall have no liability for any loss, damage or injury arising out of its use in any such combination not specifically directed. If used in combination directed by Manufacturer, the liability of Manufacturer shall in no manner extend to any damage, loss of injury not directly caused by the inclusion of the product in such combination use and in any event shall be limited to return of the amount of the purchase price of the product. Always perform a mixing test to check the compatibility of this product with all potential tank-mix partners.

Mixing Instructions
1. Fill tank one-half to three-fourths full with clean or liquid fertilizer and agitate. Prior to mixing this product or tank-mixtures of this product in liquid fertilizer, refer to appropriate label sections for use in liquid fertilizer, application instructions and compatibility determinations.
   Note: This product will not mix in high salt formulation fertilizers such as 10-34-0. When utilizing high salt formulation fertilizers as the spray carrier, use one of the following:
   a) Pre-slurry this product in water prior to adding to the tank. Use 1:1 ratio of water to this product.
   b) Add water to fertilizer solution prior to adding this product. The amount of water should be equal or greater than the amount of this product to be used.
2. This Product Alone
   When using this product alone, add this product to partially filled tank while agitating and then fill the reminder of the tank with water or liquid fertilizer.
3. This Product in Tank-Mixture
   Add the tank-mixture products in the order listed below prior to adding this product. For tank-mixtures with 2,4-DB, paraquat or glyphosate, see mixing instructions at the end of this section.
   a) Wettable Powder (WP) formulations - Make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
   b) Dry Flowable (DF)/Water Dispersible Granule (WDG) formulations - Add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
   c) Flowable (SC) formulations: Add the SC formulation to the partially filled tank while agitating.
   d) Water Soluble Concentrate (WSC) formulations: Add the WSC formulation to the partially filled tank while agitating.
   e) Emulsifiable Concentrate (EC) formulations: Add the EC formulation to the partially filled tank while agitating.

After complete mixing, add this product to the tank.

f) **Note:** For tank-mixes including 2,4-DB, paraquat or glyphosate: After complete mixing of this product, continue filling the sprayer with water and add 2,4-DB or paraquat or glyphosate near the end of the filling process.
If paraquat is included in the tank-mixture, add 8 fluid ounces of nonionic surfactant per 100 gallons of total spray mixture as the last ingredient in the tank.

Fill the remainder of the tank with water or liquid fertilizer while agitating.

4. Thorough and continuous sprayer-tank agitation must be maintained during mixing and spraying of this product. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to re-suspend the mixture before spraying is resumed.

Continue agitation while spraying.

CLEANING SPRAY EQUIPMENT

Clean application equipment thoroughly by using a strong detergent or commercial spray cleaner according to the manufacturer's directions and then triple rinsing the equipment before and after applying this product.

USE RESTRICTIONS

- Do not exceed the maximum labeled rate for any soil type.
- In the event of a crop loss due to adverse weather conditions or other reasons, any crop registered for a pre-plant incorporated application of this product can be replanted the same year without adverse effects (see *"CROPS"* section for exceptions). If replanting is necessary, do not work the soil deeper that the treated zone.
- Refer to the *"CROPS"* section for crop specific pre-harvest intervals (PHI) and feeding and grazing restrictions.

CROP ROTATION

- Use of this product in accordance with label directions is expected to result in normal growth of rotational crops in most situations. However, various environmental and agronomic factors such as arid conditions make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible. Soil characteristics and environmental conditions which may contribute to crop stress that may be accentuated by the use of this product include: coarse soils, compaction, high salinity, eroded knolls/hilltops, cold and/or wet soils, drought and heavy rainfall soon after application.
- When this product is used in tank-mix or sequential combinations, refer to label(s) of other herbicide(s) for additional rotational crop restrictions.
- Restrictions for rotational cropping after the use of this product are dependent on the application use rate of this product in the primary crop. Read the following restrictions to determine the rotational crops for their specific situation according to application use rate.

CROP ROTATION RESTRICTIONS AND LIMITATIONS

Rotational Crop Restrictions Following Applications of This Product to Field and Row Crops

1. Application Rate ≤ 2.4 Quarts (≤ 2 lbs. a.i.) per Acre

a) Crops which are labeled for pre-plant incorporated application:
These crops may be planted the same season in which this product was applied.

b) Sugar beets, Red beets and Spinach:
To avoid crop injury, do not plant Sugar beets, Red beets or Spinach for 12 months following a Spring application of this product or 14 months following a Fall application of this product.
Do not plant these crops for 18 months following a Spring application of this product or 20 months following a Fall application of this product if rainfall or irrigation was not sufficient to produce a crop.
To ensure thorough mixing of soil prior to planting Sugar beets, Red beets and Spinach, plow the land using a moldboard plow to a depth of 12 inches.

c) Proso millet, Sorghum (Milo) and Annual or Perennial grass crops or Mixtures:
Do not plant Proso millet, Sorghum (Milo) and Annual or Perennial grass crops or mixtures for 10 months after a Spring application of this product or 12 months after a Fall application this product except in the following conditions:
- In the states of Minnesota, North Dakota and South Dakota: Do not plant these crops for 18 months following a Spring application of this product or 21 months following a Fall application of this product.
- To avoid the possibility of crop injury in areas that receive less than 20 inches of rainfall or irrigation to produce a crop, do not plant these crops for 18 months following a Spring application of this product or 20 months following a Fall application of this product if rainfall or irrigation was not sufficient to produce a field or row crop.

d) Wheat and Barley:
Wheat and barley may be planted 4 months after an application of this product except under the following conditions:
- If less than 12 inches of rainfall or overhead irrigation was received between application and rotational crop planting, do not plant Wheat before 12 months after a Spring application of this product or 14 months after a Fall application of this product.

- In dryland areas and/or areas where irrigation is necessary to produce the crop treated with this product, do not plant Winter wheat or Barley as a follow crop if crop failure/destruction occurs and land is fallowed during the Summer.

e) All Other Rotational Crops Not Specifically Addressed Above:

Crops other than those to which this product may be applied as a pre-plant incorporated treatment may be planted the year following application of this product except under the following condition:

- If rainfall or irrigation was not sufficient to produce a crop, delay planting for 18 months following a Spring application of this product or 20 months following a Fall application of this product.

2. Application Rate > 2.4 Quarts (> 2 lbs. a.i.) per Acre

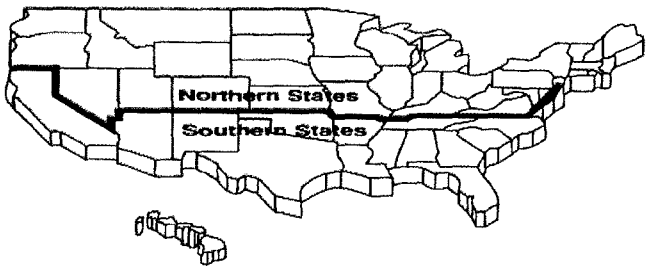
In the growing season following application of this product to field and row crops at greater than 2.4 quarts per acre, plant only those crops for which this product is labeled for pre-plant incorporated treatment or crop injury may occur. Do not plant other crops for 24 months.

Rotational Crop Restrictions Following Applications of This Product to Grove, Orchard and Vineyard Crops

In the growing season following application of this product to bearing Fruit and Nut trees, plant only those crops for which this product is labeled for pre-plant incorporated treatment or crop injury may occur.

Do not rotate to other crops (except for Fruit trees, Grapes or Nut crops) for 24 months following an application of this product to bearing Fruit or Nut trees.

USE AREA



CROPS

Disclaimer: The use of this product may result in crop injury, loss or damage including but not limited to agronomic, cultural, mechanical and environmental. Numerous risks of loss or damage to certain crops may be associated with the use of this product even when directions for use are completely followed. The user or grower should take all such risks into consideration before deciding to apply the product.

Drexel recommends testing on a small portion of the target crop to determine if damage is likely to occur. Each grower who is considering the product for such use should test this product in order to determine its suitability. A grower should only use this product to the extent that in his sole opinion, the benefit of use of this product outweighs the potential injury to the grower's crop.

In addition, many factors can affect crop growth and/or yield including but not limited to insects, diseases, weed competition, poor seed quality, improper planting depth, mechanical cultivation, poor weather (such as freezing or excessive wind, rain heat or cold), lack of excessive moisture, crusting, fertility or hardpans. Risk of loss or damage to crops may be associated with the use of this product and contribute to poor stands due to failure of crop to emerge, swelling of roots or other below ground plant parts, less vigorous plant growth and development and reduction in yield potential.

BEARING FRUIT AND NUT TREES

This product may be applied in the following individual crops within the Fruit tree and Tree nut crop groupings:

CITRUS FRUIT CROP GROUPING		
Calamondin	Kumquat	Orange (Sour, Sweet)
Citrus citron	Lemon	Pummelo
Citrus hybrids	Lime	Satsuma mandarin
Grapefruit	Mandarin (Tangerine)	Tangelo

POME FRUITS CROP GROUPING		
Apples	Mayhaw	Quince
Crabapple	Pear	
Loquat	Pear (Oriental)	

STONE FRUITS CROP GROUPING		
Apricot	Peach	Pluot
Aprium	Plum	Prunes
Cherries (Sweet, Tart)	Plum (Chickasaw, Damson, Japanese)	
Nectarine	Plumcot	

OTHER FRUIT TREES	
Pomegranate	Juneberry

TREE NUTS CROP GROUPING		
Almond	Chestnut	Pecan
Beech nut	Chinquapin	Pistachio
Brazil nut	Filbert (Hazelnut)	Walnut
Butternut	Hickory nut	
Cashew	Macadamia nut	

Methods of Application, Timing and Rates

- Apply this product by ground, chemigation or flooded basin irrigation systems.
- Apply this product either in a single application or sequentially with an interval of 30 days or more.
- Apply this product at the rate of 2.4 to 4.8 quarts per acre depending on desired length of control (see below table) per application.

Use Rates:

Short-term control	2.4 qts. per acre
Long-term control	4.8 qts. per acre

Ground Applications: This product may be applied surface-incorporated or surface pre-emergence.
Apply this product as a broadcast or banded treatment using ground equipment before weed emergence. Apply the spray directly to the ground beneath the trees and/or in areas between rows. Do not apply over the top of trees with leaves or buds or fruit. Contact by the spray mixture with leaves, shoots, or buds may cause injury.

Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation found in the *"APPLICATION INSTRUCTIONS"* section. Do not apply irrigation water treated with this product over top of trees with leaves or buds or fruits. Contact with leaves, shoots or buds by spray mixture may cause injury.

Flooded Basin Irrigation Systems: This product may be applied in flooded basin irrigation systems. Follow all directions, special instructions and precautions for flood basin found in the *"APPLICATION INSTRUCTIONS"* section.

Use Restrictions on Bearing Fruit and Nut Trees

- Do not apply by air.
- Do not apply to newly seeded nursery stock.
- Do not apply more than 4.8 quarts of this product per acre per year in Pome, Stone and other Fruit trees.
- Do not apply more than 7.2 quarts of this product per acre per year in Citrus and Nut trees.
- Do not apply within 1 day of harvest of Citrus fruit.
- Do not apply within 60 days of harvest of Pome and Stone fruits or other Tree fruits.
- Do not apply within 60 days of harvest of nuts except Almonds.
- Do not apply within 120 days of harvest of Almonds.
- Do not feed forage or graze livestock in treated groves or orchards.

CARROTS

Methods of Application, Timing and Rates

Apply this product by ground, air or chemigation.

Pre-emergence Applications: Make a single broadcast application by ground or air or by chemigation using 1.2 quarts of this product per acre as a post-plant treatment prior to emergence of the crop and before weed emergence. Apply a pre-emergence treatment within 2 days after planting.

Layby: This product may be applied only by ground equipment at layby (last mechanical cultivation) at 1 quart per acre as a directed spray to the soil between rows. Apply this product prior to weed emergence. Emerged weeds will not be controlled by this treatment. Do not allow the spray to contact Carrot plants or injury may occur. Do not apply layby applications by chemigation or by air.

Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation found in the *"APPLICATION INSTRUCTIONS"* section.
Do not allow irrigation water treated with this product to contact Carrot plants. Do not apply tank-mixtures through any type of irrigation system unless the label instructions on chemigation of all products are followed.

Use Restrictions on Carrots

- Do not apply more than 1.2 quarts of this product per acre per season.
- Do not apply within 60 days of harvest.
- Do not feed forage or graze livestock in treated fields.
- Do not apply as a broadcast spray over the top of Carrots or crop injury may result.
- Do not apply layby applications by chemigation or by air.

CARROTS GROWN FOR SEED PRODUCTION

Methods of Application, Timing and Rates

Apply this product only by layby.

Last Cultivation (Layby): Apply this product following the last mechanical cultivation (layby) at the rate of 0.6 to 2.4 quarts of this product per acre (on a broadcast basis). Uniformly apply as directed spray to the soil between rows.
Do not allow the spray to contact Carrot plants or injury may occur. Use protective shields to avoid contact with Carrot foliage. Use properly calibrated and accurate nozzles and equipment.
Layby applications can be applied to Carrots previously treated with herbicide(s) registered in/on Carrots. Consult the label(s) of the herbicide(s) for directions for use, rates to be used and precautions or restrictions for use in Carrots and for rotational crops.

Use Restrictions on Carrots Grown For Seed Production

- Do not apply as a broadcast spray over the top of Carrots or crop injury may result.
- Do not apply layby applications by chemigation or by air.
- Do not apply within 60 days of Carrot seed harvest.
- Do not feed forage or graze livestock in treated fields.
- Do not harvest Carrots for food or feed use.

Special Use Restriction on Carrots Grown For Seed Production

The pesticide applicator, the producer of the crop and the seed conditioner must be aware that use of this product according to this labeling is deemed a non-feed/non-food use. If the applicator of this pesticide is not the producer, the applicator should provide a copy of this labeling to the producer of the crop. Producers of this crop who use this product or cause the product to be used on a field they operate, should provide a copy of this pesticide label to the seed conditioner.
Consequently, no portion of this Carrot seed crop, including but not limited to green chop, hay, pellets, meal, whole seed, cracked seed, roots, bulbs, foliage and seed screenings, may be used or distributed for food or feed purposes.
Processed Carrot seed from a field treated with this product must bear a specific tag or conspicuous container labeling or if shipped in bulk, on the shipment invoice or bill of lading, with the following statement: "Not for human consumption or animal feed." All seed screenings from seed processing shall be disposed of in such a manner that the screenings cannot be distributed or used for human food or animal feed purposes. The seed conditioner shall keep records of screening disposal for 3 years from the date of disposal and shall furnish the records immediately upon request. Conditioner disposal records shall consist of documentation of on-farm disposal, disposal at a controlled dumpsite, incinerator, composter or other equivalent disposal site and shall include the lot numbers, amount of material disposed of, the grower(s) and the date of disposal.

CORN (Field, Pop, Seed, Sweet)

Additional Weeds Controlled

In addition to the weeds listed in the *"WEEDS CONTROLLED"* table, this product will control the following weeds in Corn with CULTI-SPRAY application: Wild proso millet and Shattercane.

Methods of Application, Timing and Rates

- Apply this product ground, air or chemigation.
- Apply this product in conventional, minimum or no-till as a pre-emergence, post-emergence or post-emergence incorporated (CULTI-SPRAY) application in Field corn.
- Apply this product in conventional tillage as a pre-emergence or post-emergence application in Pop corn, Seed corn or Sweet corn.

Note: Regardless of tillage system, plant Corn at least 1.5 inches deep and completely cover with soil.
In conventional tillage systems, plant into a seedbed that is firm and free of clods and trash. Use only where adequate tillage is practiced to provide good soil coverage of the Corn seed.
In no-till systems, utilize a no-till planter that is capable of planting through crop residue. The use of no-till planters under conditions that do not allow good soil coverage of the Corn seed can result in reduced crop stand or injury if this product contacts the germinating Corn seed. Check equipment to ensure good seed coverage.

Treatments of this product alone or this product in tank-mix combination(s) are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application. If cultivation is necessary because of soil crusting or weed germination, use shallow tillage and make certain that Corn seeds are below the tilled area.

Pre-emergence: Apply this product after planting but before weeds and crop emerge.

Post-emergence: Apply this product post-mergence until Field corn is 30 inches tall (20 to 24 inches tall for Pop, Seed and Sweet corn) or in the V8 growth stage, whichever is more restrictive. If the Corn canopy prevents applications from reaching the soil, use drop nozzles and apply as directed spray.

Culti-Spray: Apply this product alone or this product plus atrazine when Field corn is at least 4 inches tall until last cultivation (layby). This product plus atrazine must be applied before Field corn reach 12 inches in height. Observe the maximum allowable rates for atrazine on the atrazine label.
Under situations of low rainfall or soil moisture when deep germinating weeds such as Shattercane or Field sandbur are anticipated, mechanical incorporation will provide best results. If cultivation is needed after application and incorporation of this product, the depth of cut should be no deeper than the depth of cut used to incorporate,

Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation found in the *"APPLICATION INSTRUCTIONS"* section.

Use Rates:

Pre-Emergence or Post-Emergence Applications			
Soil Texture	**Organic Matter**		
	< 1.5% (Qts./Acre)	**1.5 to 3% (Qts/Acre)**	**> 3% (Qts./Acre)**
Coarse	0.9 to 1.2	1.2 to 1.8	1.8
Medium	1.2 to 1.8	1.8	1.8 to 2.4
Fine	1.2 to 1.8	1.8 to 2.4	1.8 to 2.4

Culti-Spray Applications - Field Corn Only		
Soil Texture	**Southern States* (Qts./Acre)**	**Northern States* (Qts./Acre)**
Coarse	0.6 to 0.9	0.9 to 1.2
Medium	0.9 to 1.2	1.2 to 1.8
Fine	0.9 to 1.8	1.2 to 1.8
*See map for specific States in the *"USE AREA"* section.		

Use Restrictions on Corn

- Do not apply this product in reduced, minimum or no-till Sweet corn, Seed corn or Pop corn.
- Do not apply this product in no-till in California.
- Do not apply this product pre-plant incorporated.

- Do not apply this product post-emergence in liquid fertilizer.
- Do not exceed 1 application per crop season at the highest rate per acre for any given soil type and application method.
- Livestock can graze or be fed forage from treated Corn after 21 days following application.

COTTON

Additional Weeds Suppressed

In addition to the weeds listed in the *"WEEDS CONTROLLED"* table, this product will suppress Russian thistle in the state of Arizona.

Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation in conventional, minimum, stale seedbed or no-till.
- Apply this product as a pre-plant surface, pre-plant incorporated, pre-emergence or layby application in Cotton. Pre-plant surface, pre-emergence and layby treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application. A shallow cultivation is recommended if soil crusting or soil compaction occurs. If weeds begin to germinate or adequate moisture is not received within 7 days after application, use shallow tillage (rotary hoe or light harrow) and make sure Cotton seeds are below tilled area. The use of a post-emergence herbicide treatment may be required to control weed escapes at planting or following cotton emergence.

Pre-plant Surface: Apply this product up to 15 days prior to planting. Apply tank-mixes of this product and sequential programs as specified under the *"TANK-MIXING INFORMATION"* section.

Pre-plant Incorporated: Apply this product up to 60 days prior to planting and incorporate within 7 days of application. Apply tank-mixes of this product and sequential programs as specified under the *"TANK-MIXING INFORMATION"* section.

Pre-emergence: Apply this product at planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods. Apply tank-mixes of this product and sequential programs as specified under the *"TANK-MIXING INFORMATION"* section.

Pre-plant Incorporated Followed by Pre-emergence Applications: Apply this product up to 60 days prior to planting and incorporate within 7 days of application. Make overlay application of this product at planting or up to 2 days after planting. Total amount of this product applied per acre cannot exceed the highest labeled rate for a given soil type. Pre-plant incorporated and pre-emergence applications of this product may be applied with the labeled tank-mix herbicide(s).

Layby Application (At last cultivation): Apply this product directly to the soil between rows as a directed spray following the last normal cultivation (layby). Layby applications can be applied in Cotton previously treated with this product or any herbicide(s) registered for use in Cotton. Consult the labels of those herbicide(s) for use directions, rates to be used, precautions or restrictions for use in Cotton and restrictions for rotational crops. The total amount of this product applied per acre per season cannot exceed the highest labeled rate for a given soil type.

Do not apply as a broadcast spray over the top of Cotton or serious crop injury can result. Avoid contact of spray to the non-woody portion of Cotton stems and to Cotton foliage or serious crop injury can result. To reduce the potential for crop injury caused by herbicide contact with Cotton foliage and stems, use protective shields when conditions favor spray drift.

Glyphosate-containing products may be applied with this product at layby in Cotton with the glyphosate tolerant gene. DO NOT apply glyphosate-containing products at layby on non-glyphosate tolerant Cotton. Do not apply this product and glyphosate tank-mix as a broadcast spray over the top of Cotton or crop injury may result.

Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.

Fall Application: This product may be applied to control weeds in Cotton in the Fall after October 15 (up to 140 days prior to planting cotton) in Arizona, California, Louisiana, Mississippi, New Mexico, Oklahoma and Texas. Apply this product at the broadcast rate of 1.2 quarts per acre on coarse or medium soils and 1.8 quarts per acre on fine soils.

Use Rates:

Soil Texture	Conventional or Minimal Tillage (Qts./Acre)	No-Till** (Qts./Acre)
Coarse	0.6 to 1.2*	0.9 to 1.2
Medium	0.9 to 1.2	1.2 to 1.8
Fine	1.2 to 1.8	1.8 to 2.4

*Do not exceed 0.9 quart per acre on coarse textured soils in California.
**Not for use on soils with more than 3% organic matter.

Use Restrictions on Cotton

- Do not apply this product in no-till in California.
- Pre-harvest interval (PHI) is 60 days between last application of this product and Cotton harvest.
- Do not exceed the highest seasonal rate of this product per acre for any given soil type as specified in the *"Use Rates"* table.
- Do not feed forage or graze livestock in treated Cotton fields.

EDIBLE BEANS [Chickpeas (Garbanzo Beans), Dry, Lima, Snap, Southern Peas (Cowpeas) and Sweet Lupine]

Methods of Application, Timing and Rates

- Apply this product in the Fall pre-plant surface or pre-plant incorporated in Chickpeas (Garbanzo beans), Dry beans, Lima beans, Snap beans and Southern peas (Cowpeas).
- Apply this product in the Fall pre-plant surface or pre-plant incorporated or pre-emergence in Sweet lupines.

Pre-plant Incorporated: Apply up to 60 days prior to planting and incorporate within 7 days of application.

Pre-emergence: Apply only to Sweet lupines at planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods.

Use Rates:

Soil Texture	Southern States* (Qts./Acre)	Northern States*	
		≤ 3% Organic Matter (Qts./Acre)	> 3% Organic Matter (Qts./Acre)
Coarse	0.9	1.2	1.2
Medium	1.2	1.5	1.8
Fine	1.8	1.8	1.8
*See map for specific States in the *"USE AREA"* section.			

Fall Applications: Fall pre-plant surface and pre-plant incorporated applications may be made in Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming only. Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected since factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity.
Apply this product and incorporate (rainfall, irrigation or mechanically) in late Fall prior to planting Edible beans [Chickpeas (Garbanzo beans)], Dry beans (such as Black turtle, Cranberry, Great northern, Navy, Red kidney and Small white type), Lima beans, Snap beans, Southern peas (Cowpeas) and Sweet lupines the following Spring. Apply this product in the late Fall when soil temperatures are 45°F or below but before the ground freezes.
DO NOT apply when air temperature is below 45°F.

Pre-plant Surface and Pre-plant Incorporated (Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming Only)

Use Rates:

Soil Texture	Broadcast Rate (Qts./Acre)	
	≤ 3% Organic Matter	> 3% Organic Matter
Coarse	0.6 to 1.2	1.2
Medium	0.9 to 1.5	1.5 to 1.8
Fine	1.2 to 1.8	1.8

Use Restrictions on Edible Beans

- Do not apply this product more than once per cropping season.
- Do not apply in any type of irrigation system.
- Do not feed Lupine hay and forage or graze livestock in treated Lupine fields.

FORAGE LEGUMES

This product may be used in Forage legumes used as a cover crop in the Federal set-aside or Conservation Reserve Program (CRP) areas.
Some stand reduction of the Legume cover crops may occur with this use. Consult local county extension service or the local ASC committee for recommended cover crops.

If loss of cover crop occurs due to adverse weather conditions, any crop registered for pre-plant incorporated use of this product can be replanted the same year into the soil treated with this product without adverse effects. If replanting is necessary, do not rework the soil deeper than the zone treated with this product. Do not feed or graze legume cover crops established following application of this product.
Destroy ultimately the cover crop residue by tillage or by leaving on the surface to retard erosion or as directed by the local ASC committee.

Methods of Application, Timing and Rates

Apply this product pre-plant incorporated or pre-emergence for weed control in Legume cover crops.

Use Rates:

Pre-Plant Incorporated or Pre-Emergence	
Soil Texture	**Broadcast Rate (Qts./Acre)**
Coarse	0.6 to 0.9
Medium	0.9 to 1.2
Fine	1.2 to 1.5

FRUITING VEGETABLES

This product may be applied to the following fruiting vegetables: Eggplant, Groundcherry *(Physalis* spp.), Pepper (includes Bell, Chili, Cooking, Pimento, Sweet), Pepino, Tomatillo, Tomato

Methods of Application, Timing and Rates

- Apply this product uniformly by ground or air only.
- Apply this product as a broadcast pre-plant incorporated or as a broadcast pre-plant surface prior to transplanting fruiting vegetables or as a post-directed application to transplanted or established direct-seeded fruiting vegetables.

Do not apply prior to direct-seeded fruiting vegetables. Do not apply post-emergence over the top of or to foliage of fruiting vegetables as severe injury may occur.
This product can be applied as a post-directed spray on the soil at the base of the plant, beneath the plants and between rows. Avoid direct contact with foliage or stems. Be sure roots of transplants are established. Following the post-directed spray and when sufficient rainfall or irrigation does not occur to activate the herbicide, mechanically incorporate at the time of blocking and thinning or at "layby." Apply this product prior to weed emergence. Emerged weed will not be controlled by this treatment.

Use Rates:

Soil Texture	Broadcast Rate (Qts./Acre)
Coarse	0.6 to 0.9
Medium	0.9 to 1.2
Fine	0.9 to 1.8

Use Restrictions on Fruiting Vegetables

- Do not apply more than 1.8 quarts of this product per acre per season.
- Do not apply within 70 days of harvest.
- Do not allow the soil treated with this product to come in contact with transplant area.
- Do not apply if row is to be covered later with plastic.

GARLIC

Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Apply this product pre-emergence, post-emergence or split application.

Pre-emergence: Apply after planting but before crop and weeds emerge.

Post-emergence: Apply at the 1st to 5th true-leaf growth stage.

Split Applications: Apply at both pre-emergence and post-emergence timings.

Chemigation: This product may be applied through sprinkler irrigation systems. Apply between the 2nd and 9th true-leaf stage (2nd to 6th true-leaf stage in California). Do not irrigate in excess of one-half inch of water. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.

Use Rates:

Soil Texture	Broadcast Rate (Qts./Acre)
Coarse	0.9
Medium	1.2
Fine	1.8

Use Restrictions on Garlic

- Do not exceed 1.8 quarts of this product per acre per crop (except Idaho, Oregon and Washington). In Idaho, Oregon and Washington, do not exceed 2.4 quarts of this product per acre per crop for Dodder control.
- Do not apply within 60 days of harvest in California and within 45 days of harvest in all other states.
- Do not feed or graze these crops.

GRAIN SORGHUM

Additional Weeds Controlled

In addition to the weeds listed in the *"WEEDS CONTROLLED"* table, this product will control the following weeds in Grain sorghum as a CULTI-SPRAY application: Wild proso millet and Shattercane.

Methods of Application, Timing and Rates

- Apply this product uniformly in water by ground equipment or by aircraft.
- Apply this product as a post-emergence incorporated (CULTI-SPRAY) in Grain sorghum in all states.
- Apply this product early post-emergence in Grain sorghum grown in states east of the Mississippi River and in Arkansas, Eastern Texas, Louisiana and the Missouri "bootheel".

Culti-Spray: Treatments of this product can be applied from the 4-inch growth stage to as late as the last cultivation (layby) of Grain sorghum. See specific directions for CULTI-SPRAY application under the *"TIMING OF APPLICATION"* section.

Early Post-emergence: For use only in states east of the Mississippi River plus Arkansas, eastern Texas, Louisiana, and the "bootheel" of Missouri. The seedbed should be firm and free of clods and trash. Use only where adequate tillage is practiced to provide good seed coverage. Plant Grain sorghum at least 1.5 inches deep to ensure good seed coverage.

Use Rates:

Culti-Spray Application		
Soil Texture	Southern States* (Qts./Acre)	Northern States* (Qts./Acre)
Coarse	0.9	1.2
Medium	1.2	1.8
Fine	1.8	1.8
*See map for specific States in the *"USE AREA"* section.		

Early Post-Emergence Application	
Soil Texture	This Product (Qts./Acre)
Coarse	DO NOT USE
Medium, Fine	1.2

Use Restrictions on Grain Sorghum

- Do not apply this product pre-plant incorporated or pre-emergence as serious crop injury can result.
- Do not apply this product in Grain sorghum more than once per crop season.
- Do not apply this product as a CULTI-SPRAY treatment in Grain sorghum planted in double row beds.
- Do not replant Grain sorghum if crop loss occurs.
- Do not apply in liquid fertilizer.
- Livestock can graze or be fed forage from Grain sorghum fields treated by this product after 21 days following application.

GREEN ONIONS (Green Eschalots or Green Shallots, Japanese Bunching Onions, Leeks, Scallions or Spring Onions)

Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Apply this product pre-emergence, post-emergence or split application.

Pre-emergence or Post-emergence: Uniformly apply 1.2 quarts of this product per acre as a broadcast spray to the soil surface as pre-emergence spray or as a post-emergence spray to the crop at the 2 to 3 true-leaf stage at least 30 days before harvest.
If this product is to be applied sequentially both as a pre-emergence and post-emergence spray, the pre-emergence spray must be applied 30 days prior to the post-emergence spray.

Chemigation: This product may be applied through sprinkler irrigation systems. Apply at 2 to 3 true-leaf stage at least 30 days before harvest. Do not irrigate in excess of one-half inch of water. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.

Use Restrictions on Green Onions

- Do not apply more than 1.2 quarts of this product per acre per application.
- Do not apply more than 2.4 quarts of this product per acre per season.
- Do not apply within 30 days of harvest.
- Do not feed forage or graze livestock in treated fields.

LENTILS AND PEAS (Dry, Dwarf, Edible Pod, English, Garden, Green, Pigeon) (Except CA)

Methods of Application, Timing and Rates

Apply this product in the Fall pre-plant surface or pre-plant incorporated in Lentils and Peas.

Pre-plant Incorporated: Apply this product 60 days prior to planting up to immediately before planting. After application, rotary hoeing and shallow cultivation/tillage can be practiced without reducing weed control. Avoid tillage that will bring untreated soil to the surface.
Note: Any crop registered for a pre-plant incorporated application of this product can be double-cropped after Peas.

Use Rates:

Soil Texture	Broadcast Rate (Qts./Acre)
Coarse	0.9
Medium	1.2
Fine	1.8

Fall Applications: Fall pre-plant surface and pre-plant incorporated applications may be made in Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming only. Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected since factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity.
Apply this product and incorporate (rainfall, irrigation or mechanically) in late Fall prior to planting Lentils or Peas (Dry, Dwarf, Edible pod, English, Garden, Green, Pigeon) the following Spring. Apply this product in the late Fall when soil temperatures are 45°F or below but before the ground freezes.
DO NOT apply when air temperature is below 45°F.

Pre-plant Surface and Pre-plant Incorporated (Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming Only)

Use Rates:

Soil Texture	Broadcast Rate (Qts./Acre)
Coarse	0.6 to 0.9
Medium	0.9 to 1.2
Fine	1.2 to 1.8

Use Restrictions on Lentils and Peas

- Do not use in California.
- Do not use this product pre-emergence in Peas.
- Do not apply this product more than once per cropping season.
- Do not apply to Lentils, Peas, Lentil or Pea forage, Pea silage, Pea hay or Pea straw grown for livestock feed.
- Do not apply in any type of irrigation system.

MINT (Peppermint, Spearmint)

Methods of Application, Timing and Rates

- Apply this product by ground or air.
- Apply this product pre-emergence.

Pre-emergence: Make a single broadcast pre-emergence application of this product to Mint using 0.9 to 2.4 quarts of this product per acre depending on soil texture (see table below) to dormant established Mint before weed emergence. After application of this product, some temporary crop injury may be observed early in the growing season as Mint breaks dormancy and begins to grow.
This product will not cause crop injury when applied according to the label under normal growing conditions.
Non-uniform application may result in injury to crops, poor stands or soil residues. Conversely, uneven application may reduce weed control. Diseases, cold weather, excessive moisture, deep planting, low or high pH, salinity or drought may weaken seedlings and plants and make them more susceptible to herbicidal damage.

Use Rates:

Soil Texture	Broadcast Rate (Qts./Acre)
Coarse	0.9 to 1.2
Medium	1.2 to 2.4
Fine	1.2 to 2.4

Use Restrictions on Mint

- Do not apply this product to "baby" Mint in the first year of growth and establishment.
- Do not apply to Mint that has broken dormancy or crop injury may result. Application to Mint that is near dormancy break can result in crop injury. Risk of crop injury increases the closer application is to Mint dormancy break.
- Do not apply to Mint stands that have been weakened by age, disease, cold weather, excessive moisture or other factors that reduce crop vigor. Mint growing under stress is more susceptible to herbicidal damage.
- Do not apply more than 2.4 quarts of this product per acre per season.
- Do not apply within 90 days of harvest.
- Do not allow livestock to graze on treated spent hay or feed treated spent hay to livestock.
- Do not apply this product on Mint through any type of irrigation system.
- Do not use in California except as directed in supplemental labeling.

NONBEARING FRUIT AND NUT TREES AND NONBEARING VINEYARDS

Methods of Application, Timing and Rates

- Apply this product as pre-plant incorporated, pre-plant surface, surface incorporated or pre-emergence weed control in several nonbearing Fruit and Nut trees and nonbearing Vineyards. This product may be used before or after transplanting the following nonbearing crops:

Almonds	Grapes	Peaches	Prunes
Apples	Grapefruit	Pears	Tangelo
Apricots	Lemons	Pecans	Tangerine
Cherries	Nectarines	Pistachio	Walnut (English)
Citrus	Oranges	Plums	

Apply the spray directly to the ground beneath the trees or vines. Do not apply over the top of trees or vines with leaves or buds. Contacting the leaves, shoots or buds with the spray mixture may cause malformed plant tissues. Do not apply to newly seeded nursery stock.

For newly transplanted and 1 year old Grapevines:

i) Apply only to dormant Grapevines.
ii) Do not apply if buds have started to swell. Application after buds have started to swell may result in leaf distortion.
iii) Do not apply to newly transplanted trees or vines until ground has settled and no cracks are present.

- Apply this product by ground, air, chemigation or by flooded basin irrigation systems.
- Apply this product either in a single application or sequentially with an interval of 30 days or more.
- Apply this product at 2.4 to 4.8 quarts per acre per application depending on the desired length of control (see *"Use Rate"* table below) but not to exceed a total of 4.8 quarts per acre per year in Pome, Stone and other Fruit trees. In Citrus, Grapevines and Nut trees, do not exceed a total of 7.3 quarts per acre per year.

Pre-plant Surface: Prior to transplanting, apply uniformly with ground or aerial equipment. Avoid root contact with treated soil when placing transplants into the hole or injury, may occur.

Pre-plant Incorporated: Apply uniformly this product prior to transplanting but before weeds emerge. Incorporate this product to a depth of 1 to 2 inches. Application and incorporation must be made prior to transplanting to avoid mechanical injury to the crop. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

Pre-emergence (Post-plant): Applications may be made in a band or broadcast.

Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section. Do not apply irrigation water treated with this product over the top of trees or vines with leaves or buds.

Flooded Basin Irrigation Systems: This product may be applied in flooded basin irrigation systems. Follow all directions, special instructions and precautions for flooded basin irrigation systems under the *"APPLICATION INSTRUCTIONS"* section.

Use Rate:

Short-term control	2.4 qts. per acre
Long-term control	4.8 qts. per acre

Use Restrictions on Nonbearing Fruit and Nut Trees and Nonbearing Vineyards

- Do not feed forage or graze livestock in treated fields.
- Do not apply more than 4.8 quarts of this product per acre per year in Pome, Stone and other Fruit trees.
- Do not apply more than 7.3 quarts of this product per acre per year in Citrus, Grapevines and Nut trees.

ONIONS [Direct Seeded and Transplanted Dry Bulb and Shallots (Dry Bulb)]

Methods of Application, Timing and Rates

Apply this product by ground, air or chemigation.

Chemigation: This product may be applied through sprinkler irrigation systems. Apply between the 2nd and 9th true-leaf stage (2nd to 6th true-leaf stage in California) unless otherwise specified below. Do not irrigate in excess of one-half inch of water. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.

MINERAL SOILS

Methods of Application, Timing and Rates

In all states except California, apply this product as a broadcast treatment when Onions or Shallots have 2 to 9 true leaves.

Use Rates:

Soil Texture	Broadcast Rate (Qts./Acre)
Coarse	0.9
Medium	1.2
Fine	1.8

State Specific Instructions:

California

This product may only be applied as a single application when Onions or Shallots have 2 to 6 true leaves.

Colorado, Kansas, and Nebraska

This product may be applied sequentially in seeded Onions. Apply first application of this product at loop stage. Apply sequential application of this product early post-emergence (2nd to 9th true-leaf stage). Do not exceed the maximum labeled rate for a given soil texture. Do not apply this product at loop stage through the 9th true-leaf stage if heavy rains are expected or severe crop injury may result.

Colorado and the High Plains of Texas (Transplanted Onions Only)

Apply and shallow incorporate (less than 2 inches deep) this product into preformed beds prior to transplanting,

Idaho, Oregon, and Washington

Apply this product as a broadcast treatment when Onions or Shallots are between the flag leaf to 9th true-leaf stage.
This product may be used at 1.8 to 2.4 quarts per acre for Dodder control on medium and fine textured soils. Do not apply this product using chemigation at the Dodder control rate.

This product may be applied in the Fall or Spring to the furrow area of land bedded in the Fall preparation for planting seed of Dry bulb onions the following Spring. Apply this product as a banded application at rates based on appropriate soil texture. Band width should be approximately one-half the width of the row spacing.
Keep away from the area where Onion seed will be planted. Harrow-off tops of beds following furrow applications of this product prior to planting Onions. For selective weed control in the Onion row, apply this product as banded post-emergence to flag leaf Onions at the labeled rates based on soil texture.
Apply this product only once to the furrow area and once to the Onion row as a post-emergence application.

Michigan
For mineral soils containing greater than 10% organic matter, follow the directions for muck soils (see *"Muck Soils"*).

Use Restrictions on Mineral Soils
- Do not incorporate mechanically except as specified for use on dry bulb onions in Colorado and the Texas High Plains.
- Do not exceed 1.8 quarts per acre per crop (except Idaho, Oregon and Washington). In Idaho, Oregon and Washington, do not exceed 2.4 quarts per acre per crop.
- Do not apply within 60 days of harvest in California and within 45 days of harvest in all other states.
- Do not feed or graze these crops.
- Do not apply this product pre-emergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after application of this product at the pre-emergence through loop stage, do not irrigate in excess of one-half inch of water.

MUCK SOILS (Except CA)
Methods of Application, Timing and Rates
Apply this product sequentially on muck soils as follows:

Time of Application and Growth Stage	Rate (Qts./Acre)
Pre-emergence through loop stage	2.4
Early post-emergence (2nd to 6th true-leaf stage)	2.4
Late post-emergence (6th to 9th true-leaf stage)	2.4

Use Restrictions on Muck Soils
- Do not apply to muck soils in California.
- Do not apply within 45 days of harvest.
- Do not feed or graze these crops.
- Do not apply more than 7.2 quarts of this product per acre per growing season on muck soils. To maximize crop safety, ensure good soil coverage during planting or transplanting and delay pre-emergence applications to the loop stage, if possible.
- Do not apply this product pre-emergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after application of this product at the pre-emergence through loop stage, do not irrigate in excess of 0.5 inch of water.
- Do not plant Spinach, Sugar beets, Red beets, Winter barley or Winter wheat as rotational crops on muck soils for 12 months from the time of last application if more than 1.8 quarts of this product per acre is applied to the Onion crop.
- If loss of Onion crop occurs, do not replant any crop other than Onions in muck soil during the same cropping year and do not work the soil deeper than 2 inches.

PEANUTS (Except CA)
Methods of Application, Timing and Rates
- Apply this product by ground, air or chemigation.
- Apply this product pre-plant incorporated.
- Apply this product pre-emergence to Peanuts grown under overhead irrigation.

Pre-plant Incorporated: Apply this product up to 60 days prior to planting and incorporate within 7 days after applications.

Pre-emergence: Apply this product at planting or up to 2 days after planting and before crop emergence. To prevent decreased crop pegging, adequate incorporation must be achieved by applying a minimum of three-fourths inch of overhead irrigation or rainfall within 48 hours of application.

Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.

Use Rates:

Region	Rate (Qts./Acre)
New Mexico, Oklahoma and Texas	0.6 to 1.2
Other Peanut growing states*	1.2
*For heavy weed infestations especially *Texas panicum*, up to 1.8 quarts of this product per acre can be used in Alabama, Georgia or Florida.	

POTATOES

Additional Weeds Controlled

In addition to the weeds listed in the *"WEEDS CONTROLLED"* table, this product will control the following weeds in Potatoes: Stinging nettle.

Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Apply this product pre-emergence, pre-emergence incorporated or early post-emergence.

Pre-emergence: Apply this product after planting but before Potatoes and weeds emerge or after drag-off.

Pre-emergence Incorporated: Apply this product and incorporate after planting but before Potatoes and weeds emerge. Where drag-off is practiced, apply this product and incorporate before, at, or after drag-off but before Potatoes and weeds emerge. Incorporate this product within 7 days of application. This product must be thoroughly and uniformly incorporated into the top 1 to 2 inches of soil. Mechanical incorporation is not required if adequate rainfall for good crop and weed emergence occurs or irrigation is received within 7 days after application. Care must be taken so that incorporation equipment does not damage seed pieces or elongating sprouts.

Early Post-emergence: Apply this product from crop emergence to the 6 inch stage of growth. Do not apply this product post-emergence if Potatoes are under stress from cold/wet or hot/dry conditions or crop injury may occur.

Chemigation: This product may be applied through sprinkler irrigation systems. Apply this product pre-emergence after planting, after drag-off or early post-emergence through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.

Use Rates:

Soil Texture	Rate (Qts./Acre)	
	≤ 3% Organic Matter	> 3% Organic Matter
Coarse	0.9	0.9
Medium	1.2	1.8
Fine	1.8	1.8

Use Restrictions on Potatoes

- Do not apply to Sweet potatoes or Yams.
- Do not apply pre-plant.
- Do not make more than 1 application of this product per season.
- Application of this product on White Rose variety potatoes during or followed by cool and/or wet weather conditions may result in crop injury.

RICE

Additional Weeds Controlled

In addition to the weeds listed in the *"WEEDS CONTROLLED"* table, this product will control the following weeds in Rice: Junglerice and Sprangletop.

Methods of Application, Timing and Rates

This product may be applied as a pre-flood, pre-emergence in dry-seeded or drilled Rice or as a delayed pre-emergence application in drilled dry-seeded Rice or as an early post-emergence in dry-seeded Rice. Treatments may be applied to conventional, reduced or minimum tillage and no-till (stale seedbed) Rice. The seedbed should be firm and free of clods and must be prepared to allow for good seed coverage. The use of a planter under conditions that do not allow good soil coverage of the Rice seed can result in reduced stand or stunting if this product contacts germinating Rice seed.

Pre-Flood, Pre-emergence: This product may be applied for pre-emergence weed control as a pre-flood, pre-rice germination herbicide in lightly incorporated dry-seeded Rice or on drilled Rice.

Seeding Directions

For all Rice seed incorporation methods, seed must be incorporated shallowly or no more than 1 inch below soil surface. Seed left on the surface may be injured or killed by this product. **However, to ensure that seed is not covered too deeply, 15 to 20% of seed total has to be visible at surface.** Increase seeding rates by a percentage corresponding to the amount of seed left on the surface. Adjust seeding ratios to meet individual practices, incorporation depths and field conditions. **For Example:** Target seeding rate is 150 pounds per acre. If approximately 15% of seed is left on soil surface, seeding rate should then be increased 22.5 pounds per acre to 177.5 pounds per acre.

Seeding depths can be affected by soil textures, tillage practices, irrigation, and methods of mechanical incorporation. Seed that is incorporated either mechanically and/or by irrigation flush must remain at a shallow depth of no more than 1 inch below the soil surface. Fields where Rice seed is incorporated too deeply will experience reduced crop stands.

Following are examples of typical implements that can be used for Rice seed incorporation: Rice roller/ridger, ring roller, light harrow, or flat roller. Regardless of the implement or method of incorporation used, seed incorporation must be less than 1 inch below the soil surface.

After Rice seed is incorporated, uniformly apply to soil surface as broadcast spray the tank mixture of this product at 1.2 quarts of this product per acre plus FirstChoice® SafeGuard™ spray adjuvant at 0.8 quart per acre. Use of this product without tank mixing with FirstChoice SafeGuard spray adjuvant can result in crop injury and loss of Rice stand.

After herbicide application, flush field with irrigation water with method best employed to facilitate a thorough soaking of field and a rapid drain. Recirculate and contain in the field of initial application tail water (runoff water) from flood irrigation that contains this product or use only on adjacent crops for which this product or other pendimethalin-based products is registered for use.

Rice seed covered with water for longer than 8 days may result in reduced stand and weed control.

Delayed Pre-emergence (Except CA): Apply this product alone or with tank-mix partner for delayed pre-emergence weed control in grain-drilled, dry-seeded Rice. Apply this product alone or in tank-mixture to levees after the levees are pulled and planted. Exposed seeds that come in contact with this product may be injured. Apply only when growth conditions favor vigorous Rice growth. The seedbed should have adequate moisture for seed germination.

Uniformly apply the specified rate of this product after Rice planting and before Rice and weed emergence (spiking). Apply after the Rice seed has absorbed water and germinated and after the soil has been previously sealed over the seed by at least 1 inch of rainfall or by irrigation (flush). If the soil has not been sealed by rain or flush, apply when 80% of germinated seeds have a primary root (radicle) or shoot at least one-half inch long. If there is insufficient moisture, flush before application of this product to supply moisture for root (radicle) initiation and for vigorous Rice and weed growth.

If applied to soil prior to these conditions or to cracked soil, stand reduction or stunting of Rice may occur. Under some conditions, use of gibberellic acid-treated seed, heavy rainfall after application or flushing after application may result in herbicide injury to rice. Rice can overcome moderate injury with appropriate cultural practices.

Due to the residual activity of this product, this treatment may be applied if Rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal Rice growth and activity of this product.

Early Post-emergence: Apply this product as a tank-mix partner. Base applications on weed and crop size guidelines of the tank-mix partner. Do not apply to fields with standing water. If necessary, fields may be flushed prior to treatment to produce vigorous Rice and weed growth. Since soil and weeds must be completely exposed to spray coverage, no flood water should be on the field at the time of application. Cloddy soil, standing water (puddles) at the time of application or cracks in the soil that form after application may result in reduced weed control.

Because of residual activity of this product, this treatment may be applied if Rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal rice growth and activity of this product.

Since the residual activity of this product is activated by moisture, this product is most effective in controlling emerging weeds when adequate rainfall or irrigation (flush) is received within 7 days after application.

Use Rates:

Delayed Pre-Emergence Applications	
Soil Texture	**Rate (Qts./Acre)**
Sand, Loamy sand	DO NOT USE
Sandy loam	0.9
Loam, Silt loam, Silt, Sandy clay loam	1.2
Silty clay loam, Clay loam, Sandy clay, Silty clay, Clay	1.2

Early Post-Emergence Application	
Soil Texture	**Rate (Qts./Acre)**
Coarse	0.9
Medium	1.2
Fine	1.2

Use Restrictions on Rice

- Do not apply this product as a pre-flood, pre-emergence treatment in Rice unless tank mixed with FirstChoice SafeGuard spray adjuvant.
- Do not apply this product through any type of irrigation system.
- Do not apply in liquid fertilizer.
- Do not use on water-seeded rice except as specified in other labeling.
- Do not apply to rice fields if fields are used for fish production, especially catfish or crayfish farming.
- Do not use water containing residues of this product from Rice cultivation to irrigate food or feed crops that are not registered for use with this product.
- In case of a crop failure due to weather conditions or disease following treatment with this product alone or in a tank-mixture, only drilled dry-seeded Rice may be immediately replanted. However, the grower assumes all risks and consequences associated with replanting of Rice because there is the potential for stand reduction or stunting. A 10% percent increase in seeding rate is suggested. Replant seed below the herbicide layer because reduced stand or stunting may occur if this product contacts germinating rice seed. Do not replant with gibberellic acid-treated seed. Do not reapply this product alone or in a tank mixture.
- Do not apply this product and then flush for germination.
- Do not apply to stressed Rice. Stress factors include cold or hot temperature extremes, excessive moisture or drought, problem soils, poor field drainage, or deep water after application.
- Do not apply early pre-emergence or pre-plant incorporated as severe Rice injury is possible.
- Do not feed forage or graze livestock in treated fields.

SOYBEANS (Except CA)

Additional Weeds Controlled

In addition to the weeds listed in the *"WEEDS CONTROLLED"* table, this product will control or reduce competition from the following weeds in Soybeans: Itchgrass and Red rice. (See *"Use Rates"* below for specific rates for these weeds.)

Methods of Application, Timing and Rates

Apply this product in conventional, minimum or no-till as a Fall surface, Fall incorporated, pre-plant surface, pre-plant incorporated or pre-emergence application in Soybeans.

Fall Applications: This product may be surface applied or incorporated in the Fall, after Fall harvest and prior to ground freeze in states North of Interstate-80 and the entire states of Iowa, Illinois, Indiana, Kansas, Kentucky, Missouri, Nebraska, Ohio, Oklahoma and Texas. Fall applications of this product will not provide season-long weed control.

Pre-plant Surface: Apply this product up to 15 days prior to planting. This product may be applied up to 45 days prior to planting when used in a tank-mix or applied sequentially with glyphosate plus imazethapyr, imazamox or imazethapyr. Apply tank-mixes of this product and sequential programs as specified under the tank-mix section.

Pre-plant Incorporated: Apply this product up to 60 days prior to planting and incorporate within 7 days after application.

Pre-emergence: Apply this product at planting or up to 2 days after planting. Apply to a firm seedbed free of clods. Do not make applications of this product pre-emergence North of Interstate-80 except in the states of Indiana, Michigan and Ohio or as specified in the supplemental labeling.

Use Rates:

Fall Surface, Fall Incorporated, Pre-Plant Surface or Pre-Plant Incorporated Applications		
Soil Texture	**Rate (Qts./Acre)**	
	≤ 3% Organic Matter	**> 3% Organic Matter**
Coarse	0.9	1.2
Medium	1.5*	1.8
Fine**	1.8	1.8
*Do not exceed 1.0 quart of this product per acre for Southern states. See map for specific States in the *"USE AREA"* section. **For heavy clay soils, apply this product at the broadcast rate of 1.8 quarts of this product per acre.		

Pre-Emergence Applications		
Soil Texture	**Rate (Qts./Acre)**	
	≤ 3% Organic Matter	**> 3% Organic Matter**
Coarse	0.9	0.9
Medium	1.2	1.2
Fine**	1.2	1.5

Pre-Plant Incorporated Applications for Red Rice Control and Itchgrass Suppression	
Soil Texture	**Rate (Qts./Acre)**
	Up to 3% Organic Matter*
Coarse	1.8
Medium	1.8
Fine	2.4
*This use is not for soils with more than 3% organic matter.	

Use Restrictions on Soybeans

- Do not apply post-emergence on Soybeans or serious crop injury can result.
- Do not use this product in Soybeans in California.
- Do not apply within 85 days of harvest.
- Do not exceed 1 application per crop season at the highest rate per acre for any given soil type and application method.
- Livestock can graze or be fed forage from treated Soybean fields.

STRAWBERRIES

Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Stunting, reduced growth, or reduction in daughter plants may occur with this use. Uniformly apply 0.9 to 1.8 quarts of this product per acre as a broadcast spray to the soil surface at pre-transplant time. A second application of 0.9 to 1.8 quarts of this product per acre may be applied in a band to the soil between crop rows 35 days before harvest but DO NOT CONCENTRATE THE RATE per acre into the treated area. Do no not allow spray to contact Strawberry plants. The second application rate is based on per unit of treated area.

Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.
Do not allow irrigation water treated with this product to contact Strawberry plants.

Use Rates:

Soil Texture	Broadcast Rate (Qts./Acre)
Coarse	0.9
Medium	1.2 to 1.5
Fine	1.5 to 1.8

Use Restrictions on Strawberries

- Do not apply more than 1.8 quarts of this product per acre per application.
- Do not apply more than 3.6 quarts of this product per acre per season.
- Do not apply within 35 days of harvest.
- Do not feed forage or graze livestock in treated fields.
- Do not apply if row is to be covered later with plastic.

SUGARCANE

Methods of Application, Timing and Rates

- Apply this product pre-emergence through layby to plant or ratoon Sugarcane.
- Applications may be made band or broadcast. Although there may be adequate crop tolerance for post-emergence applications at layby, spray must be directed under the Sugarcane canopy to obtain effective weed control.
- This product must be thoroughly and uniformly incorporated into the soil with either (a) mechanical incorporation equipment as outlined below or (b) with rainfall or irrigation, if rainfall or irrigation is adequate for good crop and weed emergence and received within 7 days after application. If rainfall or irrigation is not obtained, incorporate this product mechanically.

Mechanical Incorporation: Apply this product to loosened beds and incorporate into the top 1 to 2 inches of soil within 7 days after application.

Use Rates:

Use Area	Broadcast Rate* (Qts./Acre)
All States except Hawaii	2.4 to 3.6
Muck soil (Florida only)	2.4 to 4.85
Hawaii	2.4 to 4.85
*Use the high rate if: i) Clay soils. ii) No mechanical incorporation is planned. iii) Heavy weed populations are anticipated. iv) Itchgrass infestation is anticipated. v) Shaving is planned.	

Use Restrictions on Sugarcane

- Do not exceed 7.2 quarts of this product per acre in one growing season.
- Do not use less than 11 gallons of water as a carrier when applying this product for weed control.
- Ratoon sugarcane must be lightly shaved in early spring to remove the old stubble before incorporation over the line of Sugarcane is possible. Carefully adjust equipment to incorporate without causing excessive damage to emerging shoots.
- Do not make aerial applications at close-in because complete and uniform coverage cannot be obtained.
- Do not apply through any type of irrigation system.
- Do not apply within 90 days of harvest.
- Do not graze treated fields or feed treated forage or fodder to livestock.

SUNFLOWER

Methods of Application, Timing and Rates

- Apply this product pre-plant incorporated in all states.
- Fall pre-plant incorporated applications may be made in Minnesota, North Dakota and South Dakota.
- Apply this product pre-emergence in conventional tillage Sunflower except in California.

Note: Plant Sunflower 1.5 to 2 inches deep and completely cover with soil.

Pre-plant Incorporated (Spring): Apply up to 60 days prior to planting and incorporate within 7 days after application.

Pre-plant Incorporated (Fall Applications in Minnesota, North Dakota and South Dakota): Apply this product and immediately incorporate in late Fall prior to planting Sunflower the following Spring. Apply this product in the late Fall when soil temperatures are 45°F or below but before the ground freezes. Do not apply when air temperature is below 45°F. Prior to planting Sunflower in the Spring, fields treated with this product should receive at least one shallow additional incorporation. Spring incorporation should be at an angle to the last tillage operation.

Pre-emergence: Apply this product at planting or up to 2 days after planting. Pre-emergence applications of this product to Sunflowers may increase the likelihood of crop injury especially when Sunflowers are grown in stress situations such as compacted soils. Decreased herbicide performance compared to pre-plant incorporated applications may also result from a pre-emergence application. If dry conditions with limited precipitation exist or unseasonably cool temperatures following planting are forecasted, apply this product prior to planting and mechanically incorporate with tillage.

Use Rates:

Pre-Plant Incorporated (Spring) or Pre-Emergence (Conventional Tillage)			
Soil Texture	Southern States*	Northern States	
	Rate (Qts./Acre)	Rate (Qts./Acre)	
		≤ 3% Organic Matter	> 3% Organic Matter
Coarse	0.9	1.2	1.2
Medium	1.2	1.5	1.8
Fine	1.8	1.8	1.8
*See map of specific states under the *"USE AREA"* section.			

Pre-Plant Incorporated (Fall) Application*		
Soil Texture	Rate (Qts./Acre)	
	≤ 3% Organic Matter	> 3% Organic Matter
Coarse	1.5	1.5
Medium	1.8	2.1
Fine	2.1	2.1
*For use in Minnesota, North Dakota and South Dakota only.		

SUNFLOWER (No-Till) (Except CA)

Methods of Application, Timing and Rates

Apply this product at 2.8 quarts per acre up to 30 days before planting (pre-plant) up to immediately after planting (pre-emergence).

This product is most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application.

Use Restrictions (All Tillage Types)

- Do not apply this product post-emergence.
- Do not feed forage or graze livestock in treated sunflower fields.
- Do not use in California.

TOBACCO

Methods of Application, Timing and Rates

Apply this product pre-plant incorporated or as a layby application in transplanted Tobacco.

Pre-plant Incorporated: Apply this product with ground sprayer up to 60 days prior to transplanting Tobacco and incorporate within 7 days after application.
Applied according to directions and under normal growing conditions, this product will not harm transplanted Tobacco. Under stress conditions for plant growth such as cold/wet or hot/dry weather, this product can produce a temporary retardation of Tobacco development.

Layby: This product may be applied as a directed spray following the last normal cultivation (layby), usually 4 to 6 weeks after transplanting Tobacco. Apply this product in a 16 to 24 inch band between the crop rows. The spray should not contact tobacco plants.

Use Rates:

Pre-Plant Incorporated Application		
Use Area	Soil Texture	Rate (Qts./Acre)
Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia	Coarse	1.2
	Medium: Sandy clay loam, Loam	1.2
	Medium: Silt loam, Silt	1.5
	Fine	1.5
Other States	Coarse	1.2
	Medium	1.8
	Fine	1.8

Layby Application	
Soil Texture	Broadcast Rate* (Qts./Acre)
Coarse	0.9
Medium	1.2
Fine	1.2

Use Restrictions on Tobacco

Do not apply as a broadcast spray as contact may cause malformed tobacco leaves.

WHEAT

Methods of Application, Timing and Rates

- Apply this product by ground or air.
- Apply this product pre-emergence, delayed pre-emergence or post-emergence to Wheat for weed control in the Fall or Spring seeded Wheat.

Pre-emergence, Delayed pre-emergence or Post-emergence: Apply to a seedbed that is firm and free of clods and trash. The seedbed MUST be prepared to ensure good seed coverage by the soil and seed-to-soil contact. Use high quality seed. When applications of this product are intended to be made pre-emergence or delayed pre-emergence, plant seed at least 1 inch deep to avoid possible crop injury, but not too deep for proper germination. When applications of this product are intended to be made post-emergence, plant seed at least 0.5 inch to 1 .0 inch to avoid crop injury.

Uniformly apply this product as a pre-emergence or delayed pre-emergence (after Wheat seed has germinated) or post-emergence treatment from the 1st leaf stage of Wheat until before the flag leaf is visible/emerged for weed control. Apply this product prior to weed emergence. Emerged weeds will not be controlled by this treatment. Adequate rainfall or irrigation within 7 days after application will provide the most consistent weed control.

For control of established weeds, this product may be tank-mixed with any post-emergence herbicide(s) registered for use in Wheat. This product will provide residual control of the weeds listed in this label. Always perform a mixing test to check the compatibility of this product with all potential tank mix partners.

Use Rates:

Soil Texture	Southern States* (Qts./Acre)	Northern States* (Qts./Acre)
Coarse	0.9 to 1.2	0.9
Medium	0.9 to 1.8	1.5
Fine	1.2 to 1.8	1.2 to 1.8
*See map for specific States in the *"USE AREA"* section.		

Use Restrictions on Wheat

- Do not apply more than 1.8 quarts of this product per season.
- If loss of grain crop occurs, any crop registered for this product pre-plant incorporated use may be replanted the same year without adverse effects. Do not replant Wheat.
- Do not apply this product within 60 days of harvest of Wheat grain or straw.
- Do not apply this product within 28 days of harvest of Wheat hay.
- Do not apply this product within 11 days of harvest of Wheat forage.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Do not store below 40°F. Extended storage at temperatures below 40°F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70°F) and rock occasionally until crystals redissolve.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

Nonrefillable Container (rigid material; less than 5 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Refillable Container (≥ 250 gallons & Bulk): Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

WARRANTY—CONDITIONS OF SALE

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. To the extent consistent with applicable law, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. To the extent consistent with applicable law, Manufacturer makes no other warranties or representations of any kind, expressed or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

SIMILARITY CLINIC MEMORANDUM:

Subject: EPA Reg. No.: 19713-AAI/Pin-Dee 3.3 EC
DP Barcode: 426306
PC Code: 108501

From: Marianne Lewis, Biologist
Invertebrate Vertebrate Branch 3
Registration Division (7505P)

Marianne Lewis
JCR 3/20/15

To: PM 25
Herbicide Branch
Registration Division (7505P)

Applicant: Drexel Chemical Company
1700 Channel Avenue
Memphis, TN 38106

FORMULATION FROM EPA Reg. No. 19713-AAI LABEL:

	% by wt.
Active Ingredient(s):	
Pendimethalin:	37.4%
Inert Ingredient(s):	62.6%
Total	100.0%

Contains petroleum distillates

BACKGROUND: The registrant is claiming substantial similarity to EPA Reg. No. 241-337 and is citing specific MRID's to support the registration of their new product, EPA Reg. No. 19713-AAI. The MRID's are as follows: 414519-04 (81-1), 414519-05 (81-2), 414519-06 (81-3), 414519-07 (81-4), 414519-08 (81-5), 414519-09 (81-6).

After comparing the CSFs from the subject product and the cited product, it has been determined that these two products are similar. The subject product will be assigned the following Toxicity Categories: acute oral (81-1) – III, acute dermal (81-2) – III, acute inhalation (81-3) – IV, primary eye irritation (81-4) – III, primary skin irritation (81-5) – IV, and will classified the subject product as a non sensitizer.

RECOMMENDATIONS:

- The subject product will be assigned the Toxicity Categories listed above.
- The subject product will be classified as a non sensitizer.

The acute toxicity profile for EPA Reg. No. 19713-AAI is currently:

Acute Oral	III
Acute Dermal	III
Acute Inhalation	IV
Primary Eye	III
Primary Dermal	IV
Skin Sensitization	non sensitizer

NOTE: The acute toxicity study requirements are satisfied for the subject product.

LABELING:

ID #: 019713-AAI PIN-DEE 3.3 EC

REQUIRED INGREDIENT STATEMENT:

Contains Petroleum Distillates

SIGNAL WORD: **CAUTION**

HAZARDS TO HUMANS AND DOMESTIC ANIMALS:

Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wear long sleeved shirt, long pants, shoes, socks, and chemical resistant gloves (barrier laminate or viton, Selection Category G).

FIRST AID:

IF SWALLOWED: Immediately call a poison control center or doctor. Do not induce vomiting unless told to by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.

USER SAFETY RECOMMENDATIONS:

User should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

User should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

The proposed label must contain the following guidance:

NOTE TO PHYSICIAN:

May pose an aspiration pneumonia hazard.

Contains petroleum distillate.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
OFFICE OF PESTICIDE PROGRAMS
REGISTRATION DIVISION (7505P)

FEE

~~DOCUMENT CONTAINS CONFIDENTIAL INFORMATION~~

DP BARCODE No.; 426498 & 427307; **DECISION No.**: 500368; **FILE/ REG No.**:19713-AAI;
PC Code(s): 108501; **PRODUCT NAME**: PIN-DEE 3.3 EC; **ACTION CODE**: R301;

DATE: **May 19, 2015**

SUBJECT: **Product Chemistry Review of PIN-DEE 3.3 EC**

FROM: **Akiva Abramovitch, Ph.D.**
CITAB / RD (7505P)

THROUGH: **Shyam Mathur, Ph.D.**
Product Chemistry Team Leader
CITAB /RD (7505P)

5/19/15

TO: **Mindy Ondish/Reuben Baris, Product Manager, RM 25**
Herbicide Branch / RD (7505P)

COMPANY NAME: Drexel
FORMULATION: EC

INTRODUCTION:

The review dated April 23, 2015 is revised to address additional data submitted by the registrant in MRID 496133-01 to address deficiencies cited in the review.

Drexel has submitted an application for a new end use product Pin-Dee 3.3 EC (Herbicide). Drexel has submitted a CSF for basic and alternate formulations dated February 23, 2015. The registrant also provided product chemistry data to support the registration application and the proposed basic CSF in MRID No. 495778-01 through 495778-03. CITAB has been asked to determine the acceptability of product chemistry data submitted to support the proposed registration of this product.

SUMMARY OF FINDINGS:

1. Name of Active Ingredient(s): Pendimethalin (37.4%).

2. Has the registrant claimed substantial similarity to a registered product?

   [X] Yes; [] No; [ ] NA; if yes give the registration number of the cited product.
   EPA Reg. No. 241-337

3. All of the source materials of the active ingredient are derived from registered sources-
[X] Yes; [ ] No

4. All inert ingredients have been screened by IIAB and found to be approved for the proposed labeled uses.
[X] Yes; [ ] No

5. Confidential Statement of Formula(s):

[X] Proposed Basic - Dated: February 23, 2015;
[X] Proposed Alternate CSF #1 - Dated February 23, 2015;
Alternate CSF(s) complies with 40CFR§152.43: [X] Yes; [ ] No; [] NA

6. Product label

a. Ingredient statement: Nominal concentration of AI listed on CSF(s) concurs with product label (PR Notice 91-2).
[X] Yes, if not, explain below:

Is the sub statement in compliance with PR Notice 97-6 (inert ingredient vs other ingredient)
[X] Yes; [ ] No; if not, explain below:

Metallic equivalent: [ ] Yes [X] NA;
Soluble arsenic: [ ] Yes [X] NA
Isomeric ratios: [ ] Yes [X] NA
Acid Equivalent: [ ] Yes [X] NA; acid equivalent =

b. Health related sub statements: Product contains?

Petroleum distillate at > 10%: [X] Yes [ ] No [ ] NA
Methanol at > 4%: [ ] Yes [X] No [ ] NA
Sodium nitrate/Sodium nitrite [ ] Yes [X] No [ ] NA

c. Physical chemical hazard statement: Product label requires a statement per 40 CFR §156.78 for: flammability, explosive potential or electric insulator breakdown?
[] Yes [X] No

Is the sub statement in compliance with PR Notice 98-6 (Total Release Fogger)?
[ ] Yes; [ ] No; [X] NA; if not, explain below

d. Label requires an additional Storage and Disposal statement: [ ] Yes [X] No; if yes explain

7. Group **A**:

TRB's determination of the acceptability for the proposed product is listed in the tables below.

Guideline No.	**Study Title**		**Data submitted**		**TRB's Assessment of Data**	**MRID Nos.**
			Yes	**No**		
830.1550	Product Identity & Composition		X		A	495778-01
830.1600	Description of materials used to produce the product		X		A	495778-01
830.1650	Description of formulation process		X		A	495778-01
830.1670	Discussion on the formation of impurities		X		A	495778-01
830.1700	Preliminary analysis			X	NA	
830.1750	Certified limits (158.350)	Standard certified Limits	X		A	495778-01
		Proposed Limits				
		Justification for wider limits				
830.1800	Enforcement analytical method		X		A (GLC-FID detector using. Internal standard-validated for precision linearity& accuracy)	496133-01 & 495778-01

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver Request, I = In Progress, NA = Not Applicable; U = Upgradeable.

8. Group **B:**

Guideline No.	Study Title	Value or Qualitative Description	TRB's Assessment of Data	MRID Nos.
830.6303	Physical State	Redish-yellow liquid with petroleum odor	A	495778-02
830.6314	Oxidation/ Reduction	No data provided. Waiver request. See data matrix footnotes for rational	W	
830.6315	Flammability	Not flammable, Above 208F	A	495778-02
830.6316	Explodability	Not explosive	W	
830.6317	Storage Stability	.A two week study at 54 C indicated that the product was stable	A	495778-03
830.6320	Corrosion	.A two week study at 54 C indicated that the product was not corrosive to the HDPE bottle container	A	495778-03
830.7000	pH	5.85 1% solution	A	495778-02
830.7100	Viscosity	20 centistokes at 20 C	A	495778-02
830.7300	Density (units)	8.78 lb/gal	A	495778-02

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver request, NA =Not applicable, I= In progress, U = Upgradeable.

CONCLUSIONS:

CITAB has reviewed the product chemistry data submitted & cited for the proposed end-use product and has concluded that:

1. The basic and alternate CSFs dated February 23, 2015 are acceptable.

2. The registrant satisfied the product chemistry data requirements for the registration of this product.

3. This product is substantially similar to the cited product EPA reg. No. 241-337 from a product chemistry perspective

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

May 07, 2015

DREXEL CHEMICAL COMPANY
PO.BOX : 13327
MEMPHIS, TN 38113-0327

Report of Analysis for Compliance with PR Notice 11-03

Thank you for your submittal of 13-APR-15. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

We are unable to accept your data submittal for further processing and review, because of the significant deficiencies noted below. It is being returned to you for correction. If deficiencies were found which apply to your overall submission, they are described immediately following this paragraph. If problems are found with individual studes, they are described below linked to the study identifier found on the enclosed copy of your bibliography.

49613301

* When data confidentiality is claimed under FIFRA Section 10 (d)(1)(A), (B), or (C), all confidential information must be excised from the body of the study and placed in a Confidential Attachment. See pages 8 and 15 of PR Notice 86-5.

Drexel Chemical Company

April 9, 2015

Document Processing Desk **(REGFEE)**
ATTN: Ms. Mindy Ondish, Team 25
Office of Pesticide Programs (7505P)
U.S. Environmental Protection Agency
Rm S-4900, One Potomac Yard
2777 S Crystal Drive, Arlington, VA 22202

Re: Submission of Additional Information per EPA's Letter dated April 7, 2015
PIN-DEE 3.3EC (EPA File Symbol 19713-AAI)

Dear Ms. Ondish,

Further to your today's e-mail, please find the following in response to EPA's letter of April 7, 2015.

1. Completed EPA Form 8570-1

2. Three (3) copies of the following study:

49613301 • Manufacturing Process for Drexel Pin-Dee 3.3 EC
OPPTS 830.1800 Enforcement Analytical Method

This is a revision of the enforcement analytical method submitted to the Agency on February 23, 2015 as part of the Manufacturing Process study, MRID No. 49577801.

If you have questions/clarification regarding this submission, I can be reached at (901) 774-4370 or e-mail lchan@drexchem.com.

Thank you.

Respectfully yours,
FOR DREXEL CHEMICAL COMPANY
Luz G. Chan
Luz G Chan
Registration Manager

Please read instructions on reverse before comp g form. Form Approve MB No. 2070-0060. Approval expires 2-28-95

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☑ **Registration**
☐ **Amendment**
☐ **Other**

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
19713-AAI	Reuben Baris	☑ None ☐ Restricted
4. Company/Product (Name)	**PM#**	
PIN-DEE 3.3 EC	25	

5. Name and Address of Applicant *(Include ZIP Code)*

Drexel Chemical Company
P.O. Box 13327
Memphis, TN 38113-0327

☐ *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

☐ Amendment - Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☐ Final printed labels in repsonse to Agency letter dated _____
☐ "Me Too" Application.
☑ Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of supplemental information information. Details are in the cover letter accompanying this submission.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Metal ☐ Plastic ☐ Glass ☐ Paper ☐ Other (Specify)
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☐ Label ☐ Container		☐

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☐ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Luz G Chan	Registration Manager	(901) 774-4370

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title
Luz G. Chan	Registration Manager
4. Typed Name	**5. Date**
Luz G Chan	April 9, 2015

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
OFFICE OF PESTICIDE PROGRAMS
REGISTRATION DIVISION (7505P)

FEE

DP BARCODE No.; 426498; **DECISION No.**: 500368; **FILE/ REG No.**:19713-AAI; **ACTION CODE**: R301; **PC Code(s)**: 108501; **PRODUCT NAME**: **PIN-DEE 3.3 EC;**

DATE: **April 21, 2015**

SUBJECT: **Product Chemistry Review of PIN-DEE 3.3 EC**

FROM: **Akiva Abramovitch, Ph.D.**
CITAB / RD (7505P)

THROUGH: **Shyam Mathur, Ph.D.**
Product Chemistry Team Leader
CITAB /RD (7505P)

4/23/15

TO: **Mindy Ondish/Reuben Baris, Product Manager, RM 25**
Herbicide Branch / RD (7505P)

COMPANY NAME: Drexel
FORMULATION: EC

INTRODUCTION:

Drexel has submitted an application for a new end use product Pin-Dee 3.3 EC (Herbicide). The registrant has submitted a CSF for basic and alternate formulations dated February 23, 2015. The registrant also provided product chemistry data to support the registration application and the proposed basic CSF in MRID No. 495778-01 through 495778-03. CITAB has been asked to determine the acceptability of product chemistry data submitted to support the proposed registration of this product.

SUMMARY OF FINDINGS:

1. Name of Active Ingredient(s): Pendimethalin (37.4%).

2. Has the registrant claimed substantial similarity to a registered product?

[X] Yes; [] No; [ ] NA; if yes give the registration number of the cited product.
EPA Reg. No. 241-337

3. All of the source materials of the active ingredient are derived from registered sources-
[X] Yes; [ ] No

4. All inert ingredients have been screened by IIAB and found to be approved for the proposed labeled uses.
[X] Yes; [ ] No

5. Confidential Statement of Formula(s):

[X] Proposed Basic - Dated: February 23, 2015;
[X] Proposed Alternate CSF #1 - Dated February 23, 2015;
Alternate CSF(s) complies with 40CFR§152.43: [X] Yes; [ ] No; [] NA

6. Product label

a. Ingredient statement: Nominal concentration of AI listed on CSF(s) concurs with product label (PR Notice 91-2).
[X] Yes, if not, explain below:

Is the sub statement in compliance with PR Notice 97-6 (inert ingredient vs other ingredient)
[X] Yes; [ ] No; if not, explain below:

Metallic equivalent: [ ] Yes [X] NA;
Soluble arsenic: [ ] Yes [X] NA
Isomeric ratios: [ ] Yes [X] NA
Acid Equivalent: [ ] Yes [X] NA; acid equivalent =

b. Health related sub statements: Product contains?

Petroleum distillate at > 10%: [X] Yes [ ] No [ ] NA
Methanol at > 4%: [ ] Yes [X] No [ ] NA
Sodium nitrate/Sodium nitrite [ ] Yes [X] No [ ] NA

c. Physical chemical hazard statement: Product label requires a statement per 40 CFR §156.78 for: flammability, explosive potential or electric insulator breakdown?
[] Yes [X] No

Is the sub statement in compliance with PR Notice 98-6 (Total Release Fogger)?
[ ] Yes; [ ] No; [X] NA; if not, explain below

d. Label requires an additional Storage and Disposal statement: [ ] Yes [X] No; if yes explain

7. Group **A**:

TRB's determination of the acceptability for the proposed product is listed in the tables below.

Guideline No.	Study Title		Data submitted		TRB's Assessment of Data	MRID Nos.
			Yes	No		
830.1550	Product Identity & Composition		X		A	495778-01
830.1600	Description of materials used to produce the product		X		A	495778-01
830.1650	Description of formulation process		X		A	495778-01
830.1670	Discussion on the formation of impurities		X		A	495778-01
830.1700	Preliminary analysis			X	NA	
830.1750	Certified limits (158.350)	Standard certified Limits	X		A	495778-01
		Proposed Limits				
		Justification for wider limits				
830.1800	Enforcement analytical method		X		A (GLC-FID detector using. Internal standard-validated for precision-not for linearity& accuracy)	495778-01

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver Request, I = In Progress, NA = Not Applicable; U = Upgradeable.

DP BARCODE No.; 426498; **DECISION No.**: 500368; **FILE/ REG No.**:19713-AAI; **ACTION CODE**: R301; **PC Code(s)**: 108501; **PRODUCT NAME**: **PIN-DEE 3.3 EC;**

8. Group **B:**

Guideline No.	Study Title	Value or Qualitative Description	TRB's Assessment of Data	MRID Nos.
830.6303	Physical State	Redish-yellow liquid with petroleum odor	A	495778-02
830.6314	Oxidation/ Reduction	No data provided. No waiver request	G	
830.6315	Flammability	Not flammable, Above 208F	A	495778-02
830.6316	Explodability	Not explosive	W	
830.6317	Storage Stability	. .A two week study at 54 C indicated that the product was stable	A	495778-03
830.6320	Corrosion	.A two week study at 54 C indicated that the product was not corrosive to the HDPE bottle container	A	495778-03
830.7000	pH	5.85 1% solution	A	495778-02
830.7100	Viscosity	20 centistokes at 20 C	A	495778-02
830.7300	Density (units)	8.78 lb/gal	A	495778-02

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver request, NA =Not applicable, I= In progress, U = Upgradeable.

CONCLUSIONS:

CITAB has reviewed the product chemistry data submitted & cited for the proposed end-use product and has concluded that:

1. The basic and alternate CSFs dated February 23, 2015 are acceptable.

2. The registrant satisfied the product chemistry data requirements for the registration of this product with the exception of the 830.6314 oxidation-reduction and 830.6317 miscibility data requirements. Also, the GLC-FID detector analytical method using internal standard was validated only for precision and not for linearity& accuracy as required.

Ondish, Mindy

From: Luz Chan <lchan@drexchem.com>
Sent: Thursday, April 09, 2015 3:53 PM
To: Ondish, Mindy
Subject: RE: 19713-AAI Technical Screen Deficiency - Response to EPA Letter dd 4/7/2015 - Validation of Enforcement Analytical Method

Ok. I've got a packet to EPA today. Should be there next week.
Thanks, Mindy.

From: Ondish, Mindy [mailto:ondish.mindy@epa.gov]
Sent: Thursday, April 09, 2015 2:39 PM
To: Luz Chan
Cc: Scott Pace
Subject: RE: 19713-AAI Technical Screen Deficiency - Response to EPA Letter dd 4/7/2015 - Validation of Enforcement Analytical Method

You will need to submit this formally through the front-end for MRID processing. Be sure to include a cover letter referencing that this is a revision to 49577801 for 19713-AAI and send to my attention (via Reuben Baris PM25).

From: Luz Chan [mailto:lchan@drexchem.com]
Sent: Thursday, April 09, 2015 2:50 PM
To: Ondish, Mindy
Cc: Scott Pace
Subject: RE: 19713-AAI Technical Screen Deficiency - Response to EPA Letter dd 4/7/2015 - Validation of Enforcement Analytical Method
Importance: High

Mindy, me again.
Attached is the analytical method that included linearity and accuracy addressing the Agency's letter of April 7, 2015.
If there's anything else, just kindly let me know.
Thank you and best regards,
Luz

From: Ondish, Mindy [mailto:ondish.mindy@epa.gov]
Sent: Thursday, April 09, 2015 8:58 AM
To: Luz Chan
Cc: Scott Pace
Subject: RE: 19713-AAI Technical Screen Deficiency

Thanks Luz, on point #2 I think the data matrix is fine, no need to submit additional rationale.
I will wait on your response for point #1.

Mindy

From: Luz Chan [mailto:lchan@drexchem.com]
Sent: Thursday, April 09, 2015 9:22 AM
To: Ondish, Mindy
Cc: Scott Pace
Subject: FW: 19713-AAI Technical Screen Deficiency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

April 7, 2015

Luz Chan
Registration Manager
Drexel Chemical Company
P.O. Box 13327
Memphis, TN 38113-0327

Subject: Preliminary Technical Screening Deficiency
Product Name: Pin-Dee 3.3 EC
EPA File Symbol: 19713-AAI
Application Date: February 23, 2015
Decision Number: 500368

Dear Ms. Chan:

The Agency has completed its preliminary technical screening of your application pursuant to Section 33(f)(4)(B)(i)(II) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended by the Pesticide Registration Improvement Extension Act. The Agency has determined that your application has not passed the preliminary technical screen and therefore is subject to rejection if the application is not corrected.

Specifically, the product chemistry data package is incomplete due to the following:

1. Guideline 830.1800: The validation of the enforcement analytical method only included precision; method validation for linearity and accuracy are missing and must be submitted.

2. Guideline 830.6314: Oxidation/Reduction; Guideline 830.6319: Miscibility; and Guideline 830.6321: Dielectric Breakdown Voltage are missing and must be submitted. However, waivers may be requested.

In order for the review of your product to continue, you will need to correct your application to address the item(s) listed above within ten business days of the date you received this letter. Corrections must be received by EPA by the tenth business day. EPA recommends sending your complete set of corrections by email to the contact listed below to ensure they are timely received. If studies or confidential information are being submitted by mail, a complete courtesy copy received by email by the deadline will be considered timely. If you do not correct the application or do not respond within ten business days, your application will be rejected.

At this time you could also choose to withdraw your application.

If you have any questions, please contact Mindy Ondish at (703)605-0723 or at ondish.mindy@epa.gov.

Sincerely,

Susan Lewis
Director
Registration Division
Office of Pesticide Programs

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460
OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
OFFICE OF PESTICIDE PROGRAMS REGISTRATION DIVISION (7505P)

DP BARCODE No.: D426498; **FILE SYMBOL No.**: 19713-AAI (screen); **PRODUCT NAME**: PIN-DEE 3.3EC; **DECISION No.**:500368; **PC Code(s)**: 108501; **ACTION CODE**: R301; **FOOD Use**: Yes

DATE OUT: April 6, 2015

SUBJECT: Completeness check screening for end use product "PIN-DEE 3.3EC"

FROM: Shyam Mathur,
Product Chemistry Team Leader
Technical Review Branch/RD (7505P)

TO: Mindy Ondish / Reuben Baris, RM 25
Herbicide Branch / RD (7505P)

Company Name: Drexel Chemical Company
Formulation Type: Herbicide
Active Ingredient(s): Pendimethalin (37.4%)
MRID No(s).: 49577801 to 49577803

CONCLUSION:

Deficiencies: Yes
(if there are deficiencies they are indicated below each heading as Note 1, Note 2 Etc)

Group A: All required Data submitted.
Note 1: 830.1800: The validation of enforcement analytical was done only for precision, but the method was not validated for linearity & accuracy. Method validation for linearity & accuracy must also be submitted.

Group B: All required data submitted.
Note 2: No data were submitted for the following guidelines: 830.6314 (oxidation/reduction), 830.6319 (miscibility) and 830.6321 (dielectric breakdown voltage). The registrant can request waiver if needed.

CSF: Basic CSF & alternate CSF #1 (dated 02-23-2015) submitted.

Note to PM: If the deficiencies are found in the screen results, please inform the registrant and bring back to author of the report or to Joe the corrected deficiencies in response to 10 day letter, so that it can be attached to the original bean, if the data package is still in CITAB. New Bean is required in case the bean has been closed by CITAB. Thank you.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

March 06, 2015

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

DREXEL CHEMICAL COMPANY
PO.BOX : 13327
MEMPHIS, TN 38113-0327

Report of Analysis for Compliance with PR Notice 11-03

Thank you for your submittal of 25-FEB-15. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 11-03. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.

Drexel Chemical Company

February 23, 2015

Document Processing Desk **(REGFEE)**
ATTN: Ms. Mindy Ondish, Acting PM 25
Office of Pesticide Programs (7505P)
U.S. Environmental Protection Agency
Rm S-4900, One Potomac Yard
2777 S Crystal Drive, Arlington, VA 22202

Re: Submission of Me-Too Registration Application
PIN-DEE 3.3EC (EPA File Symbol 19713-XXX)

Dear Ms. Ondish,

Please find the following in support of the above.

1. Completed EPA Form 8570-1

2. PRIA fee amounting to $1,806 for Code Action R301

3. Two copies of the proposed basic CSF and alternate CSF

4. Certification with respect to citation of data

5. Data matrix

6. Three (3) copies of the proposed label

7. Three (3) copies of the following studies:

49577801 • Manufacturing Process for Drexel Pin-Dee 3.3 EC
(OPPTS 830.1550, 830.1600, 830.1650, 830.1670, 830.1750, 830.1800)

49577802 • Physical and Chemical Characteristics of Drexel Pin-Dee 3.3 EC: Color, Physical State, Odor, Flammability, pH, Viscosity and Density
(OPPTS 830.6302, 830.6303, 830.6304, 830.6315, 830.7000, 830.7100, 830.7300)

49577803 • Physical and Chemical Characteristics of Pin-Dee 3.3EC: Storage Stability and Corrosion Characteristics
(OPPTS 830.6317 and 830.6321)

If you have questions/clarification regarding this submission, I can be reached at (901) 774-4370 or e-mail lchan@drexchem.com. Thank you.

Respectfully yours,
FOR DREXEL CHEMICAL COMPANY
Luz G. Chan
Luz G Chan
Registration Manager

1700 Channel Avenue • Post Office Box 13327 • Memphis, Tennessee 38113-0327
Phone: (901) 774-4370 • Fax: (901) 774-4666 • E-Mail: info@drexchem.com • www.DrexChem.com
SINCE1972

Fee for Service

{964828O~

This package includes the following

- ◉ New Registration
- ○ Amendment

☑ Studies? ☐ Fee Waiver?

☐ volpay % Reduction: ___

for Division

- ○ AD
- ○ BPPD
- ◉ RD

Risk Mgr. 25

Receipt No. S-	964828
EPA File Symbol/Reg. No.	19713-AAI
Pin-Punch Date:	2/25/2015

☐ This item is NOT subject to FFS action.

Action Code:

Requested:	R301
Granted:	R301
Amount Due: $	1,806

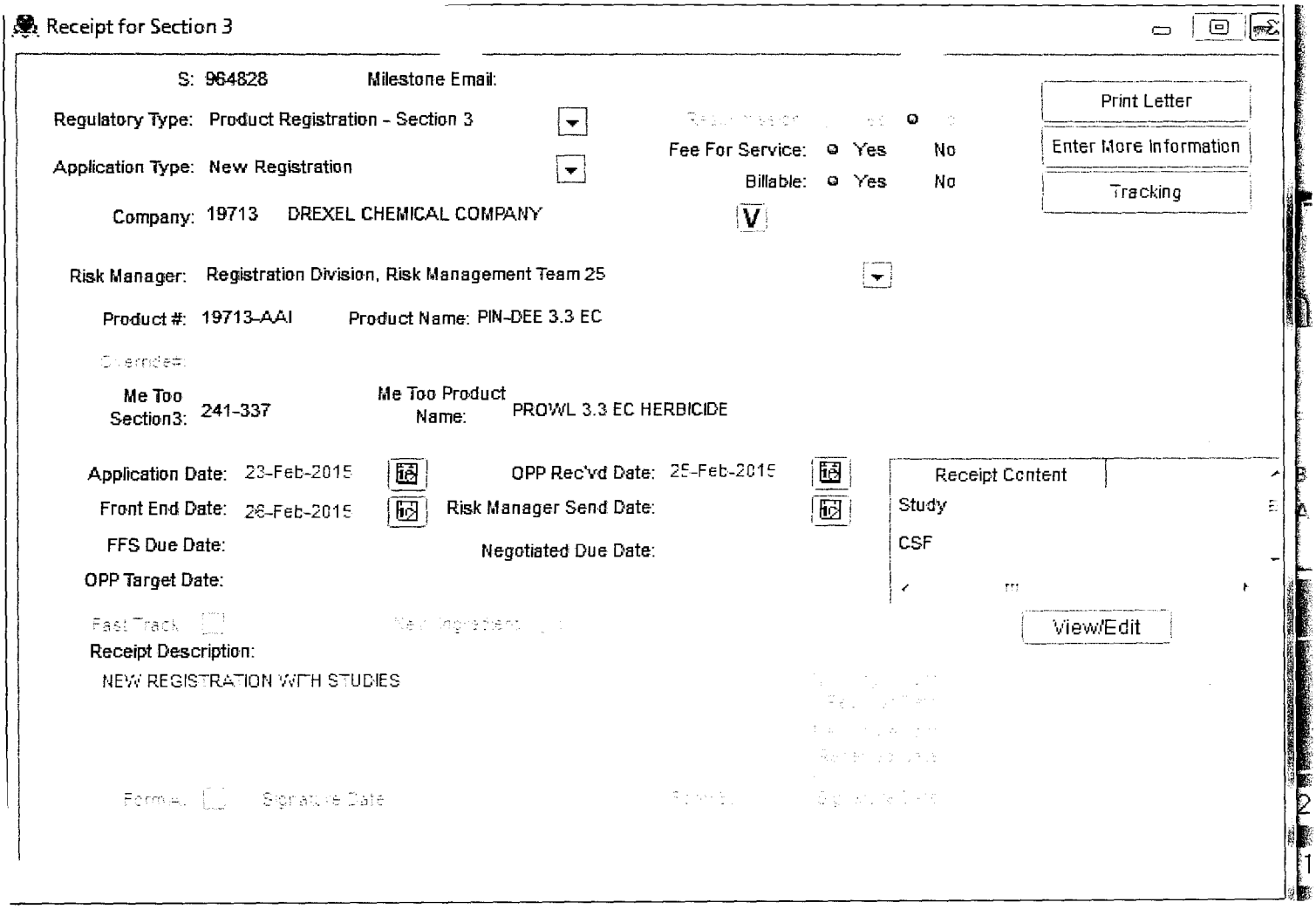
Parent/Child Decisions:

☐ Inert Cleared for Intended Use ☐ Uncleared Inert in Product

Reviewer: Aswathy Balan Date: 2/26/15

Remarks:

Similarity Clinic


Receipt for Section 3
S: 964828
Milestone Email:
Regulatory Type: Product Registration - Section 3
Application Type: New Registration
Fee For Service: Yes No
Billable: Yes No
Print Letter
Enter More Information
Tracking
Company: 19713 DREXEL CHEMICAL COMPANY
V
Risk Manager: Registration Division, Risk Management Team 25
Product #: 19713-AAI
Product Name: PIN-DEE 3.3 EC
Me Too Section3: 241-337
Me Too Product Name: PROWL 3.3 EC HERBICIDE
Application Date: 23-Feb-2015
OPP Rec'vd Date: 25-Feb-2015
Front End Date: 26-Feb-2015
Risk Manager Send Date:
FFS Due Date:
Negotiated Due Date:
OPP Target Date:
Receipt Content
Study
CSF
View/Edit
Receipt Description:
NEW REGISTRATION WITH STUDIES

PRIA 3 – 21 Day Content Screen Review Worksheet

(EPA/OPP Use Only)

September 2012

21 Day Screen Start Date: 2-25-15

Experts In-Processing Signature: B.B. Date 2-27-15 Fee Paid: Yes ✓

Division management contacted on issues No_____ Yes _____ Date _____

EPA Reg. Number: 19713-AAI	EPA Receipt Date: 2-25-15

	Items for Review			Yes	No	N/A*
1	**Application Form** (EPA Form 8570-1) signed & complete including package type			X		
2	**Confidential Statement of Formula** all boxes completed, form signed, and dated (EPA Form 8570-4)			X		
	a) All inerts, including fragrances, approved for the proposed uses (see Footnote A)	**yes** X	**no**			
3	**Certification with Respect to Citation of Data** (EPA Form 8570-34) completed and signed (N/A if 100% repack)			X		
	Certificate and data matrix consistent			X		
	If applicant is relying on data that are compensable, is the offer to pay statement included. (see Footnote B)	**yes**	**no**			
	If applicable, is there a letter of Authorization for exclusive use only.					
4	**Formulator's Exemption Statement** (EPA Form 8570-27) completed and signed (N/A if source is unregistered or applicant owns the technical)			X		
5	**Data Matrix** (EPA Form 8570-35) both internal and external copies (PR 98-5) completed and signed (N/A if 100% repack)			X		
	a) Selective Method (Fee category experts use)	**yes** X	**no**			
	b) Cite-All (Fee category experts use)					
	c) Applicant owns all data (Fee category experts use)					
6	**5 Copies of Label (Electronic labels on CD are encouraged and guidance is available)**			X		
7	**Is the data package consistent with PR Notice 86-5**			X		
8	**Notice of Filing included with petitions**					X

9	**If applicable for conventional applications, <u>reduced risk rationale</u>**			X
	<u>Required Data</u> and/or data waivers. See Footnote C.			
10	a) List study (or studies) not included with application			

Comments:

Documentation: Pass

- Certification form was missing (Received Corrections)
- Required forms are complete

Inerts: Pass

- Inerts approved for food use under 40CFR180.920, preharvest application to growing crops.

II-3: Pass

MRID - 495778

Status: Pass

T J 3/11/15

* N/A – Not Applicable

Footnotes

A. During the 21 day initial content review, all CSFs will be reviewed to determine whether all inerts listed, including fragrances, are approved for the proposed uses or have an application pending with the Agency. If an unapproved inert with no application pending with the Agency is identified, the applicant must either 1) resolve the inert issue by, for example, removing the inert, substituting it with an approved inert, submitting documentation that EPA approved the inert for the proposed pesticidal uses, correcting mistakes on the CSF, etc. or 2) provide the data to support OPP approval of the inert or 3) withdraw the application. Removing or substituting an inert ingredient will require a new CSF and may require submission of data. All information, forms, data and documentation resolving the inert issue must have been received by the Agency or the application withdrawn within the 21 day period, otherwise, the Agency will reject the application as described below.

To successfully complete this aspect of the 21 day initial content screen, applicants are **strongly encouraged** to verify that all inert ingredients have been approved for the application's uses or have an application pending with the Agency **even if a product is currently registered** by consulting the inert Web site and if the inert is not approved nor has an application pending with the Agency, to **obtain the necessary inert approval prior to submitting an application to register a pesticide product containing that inert ingredient.** Some inert ingredients are no longer approved for food uses or certain types of uses. The name and/or CAS number on a CSF must match the name and CAS number on this web site. Simple typographical errors in the name or CAS number have resulted in processing delays.

If an inert is not listed on the inert ingredient web site and the applicant believes that the inert has been approved, the applicant should contact the Inert Ingredient Assessment Branch (IIAB) at inertsbranch@epa.gov and resolve the issue. Copies of the correspondence with IIAB resolving the issue should accompany the application. All new inerts except PIP inerts are reviewed by IIAB. The IIAB should also be contacted for any questions on what supporting data needs to be submitted for and the Agency's inert review process. Questions on PIP inerts should be directed to the Chief of Microbial Pesticides Branch.

When a brand, trade, or proprietary name of an inert ingredient is listed on a CSF, additional information such as an alternate name of the inert, CAS number or other information must also be included to enable the Agency to determine if it has been approved. Each component of an inert mixture (including a fragrance) must be identified. In some cases, the supplier of the mixture or fragrance may need to provide this information to the Agency. Prior to the Agency's receipt of an application, applicants must arrange with a proprietary mixture or fragrance supplier to provide the component information to the Agency or promptly upon EPA's request. If the inert ingredients in a proprietary blend (including fragrances) cannot or are not identified or provided within the 21-day content review period, the Agency will reject the application.

During the 21 day content review, applicants should submit information to the individual identified by the Agency when the applicant is informed of an unapproved inert.

Unapproved Inerts Identified on CSFs

All applications except conventional new products and PIPs

Once an unapproved inert is identified on a CSF, the Agency will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or

2. Provide the required information necessary to identify an inert approval application that is pending with the Agency; or

3. Submit the information and data needed for the Agency to approve the unapproved inert. If this option is selected and implemented, the Agency may request an extension in the PRIA decision review timeframe to accommodate the inert review/approval process;

4. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of these options is selected and implemented by the applicant within the 21 day content review period, the Agency will reject the application and retain 25% of the full fee of the category identified.

Conventional New Product Applications

When the Registration Division identifies an unapproved inert on a CSF with an application for a new product that the applicant has not identified as requiring an inert approval (R300 or R301), it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or

2. Submit the information and data needed for the Agency to approve the unapproved inert, including any required petition to establish or amend a tolerance or exemption from a tolerance. (This option may change the PRIA category for the application, which could require a longer decision review time and a larger fee. If additional fees are due, they must be received by the Agency within the 21 day content review period.)

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21-day content-review period, the Agency will reject the application and retain 25% of the appropriate fee for the new product-inert approval category.

PIP Applications

When the Biopesticide and Pollution Prevention Division identifies an unapproved inert on a PIP CSF and a request to approve the inert does not accompany the application, it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the spelling or name of the inert to that in 40 CFR 174, or providing documentation that the inert has been approved; or

2. Submit the information and data needed for the Agency to approve the unapproved inert. If an inert ingredient tolerance exemption petition is required, the petition must be received by the Agency and the B903 fee paid within the 21 day period. If this option is selected and implemented, the Agency will discuss harmonizing the timeframe for both actions.

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21 day content review period, the Agency will reject the application and retain 25% of the fee.

B. A policy on documentation of offers to pay is still being developed, however, for a me-too or fast track (similar/identical) new product, R300 or A530, an application without the necessary authorizations of offers to pay will be placed into either R301 or A531. The Agency recommends that authorizations of offers to pay be submitted with other PRIA applications to avoid delays in the Agency's decision.

C. Biopesticide applicants are advised to contact the Agency and discuss study waivers prior to submitting their application to the Agency. Documentation of such discussions should be submitted with the study waiver.

Jackson, Tracy

From: Luz Chan <lchan@drexchem.com>
Sent: Wednesday, March 11, 2015 10:21 AM
To: Jackson, Tracy
Subject: RE: Application Reg# 19713-AAI

Hi, Tracy.
It is required if the product is produced by an integrated system but in the case of 19713-AAI,
Guideline 830.1700 Preliminary Analysis (5-batch analysis) is not required as the starting Technical material is already a registered Technical.
Hope this helped.
Thanks,
Luz

From: Jackson, Tracy [mailto:jackson.tracy@epa.gov]
Sent: Wednesday, March 11, 2015 9:15 AM
To: Luz Chan
Subject: RE: Application Reg# 19713-AAI

Hello Luz,

The data matrix form is missing the guideline 830.1700 Preliminary Analysis. Is it required? I have to fill out a check list of guidelines listed on the data matrix, if it is required we check yes if it is not we check or write in NA.

Thank You

Tracy Jackson
EPA Contractor
703-308-7227
2777 S. Crystal Drive
Arlington, VA 22202

From: Luz Chan [mailto:lchan@drexchem.com]
Sent: Wednesday, March 11, 2015 9:41 AM
To: Jackson, Tracy
Subject: RE: Application Reg# 19713-AAI

Okay, thanks, Tracy. Here is the form.
Thank you,
Luz

From: Jackson, Tracy [mailto:jackson.tracy@epa.gov]
Sent: Wednesday, March 11, 2015 8:30 AM

To: Luz Chan
Subject: RE: Application Reg# 19713-AAI

Hello Luz,

Yes the Certification form is still required.

Thank You

Tracy Jackson
EPA Contractor
703-308-7227
2777 S. Crystal Drive
Arlington, VA 22202

From: Luz Chan [mailto:lchan@drexchem.com]
Sent: Wednesday, March 11, 2015 9:22 AM
To: Jackson, Tracy
Subject: RE: Application Reg# 19713-AAI

Tracy,
This is covered by Formulator's Exemption. Product specific data on the other hand are either our own or old. But if you think we still need to submit the certification with respect to citation of data form, not a problem. Just please confirm.
Thank you,
Luz

From: Jackson, Tracy [mailto:jackson.tracy@epa.gov]
Sent: Wednesday, March 11, 2015 7:51 AM
To: Luz Chan
Subject: Application Reg# 19713-AAI

Dear Luz Chan,

I am contacting you regarding your submission in support of **PIN-DEE 3.3 EC (19713-AAI).** A Certification with Respect to Citation of Data form (8570-34) is required with this submission.

Please send form to jackson.tracy@epa.gov

Thank You

Tracy Jackson
EPA Contractor
703-308-7227
2777 S. Crystal Drive
Arlington, VA 22202

Jackson, Tracy

From: Jackson, Tracy
Sent: Wednesday, March 11, 2015 8:51 AM
To: 'Luz Chan'
Subject: Application Reg# 19713-AAI

Dear Luz Chan,

I am contacting you regarding your submission in support of **PIN-DEE 3.3 EC (19713-AAI).** A Certification with Respect to Citation of Data form (8570-34) is required with this submission.

Please send form to jackson.tracy@epa.gov

Thank You

Tracy Jackson
EPA Contractor
703-308-7227
2777 S. Crystal Drive
Arlington, VA 22202

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

February 26, 2015

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

OPP Decision Number: D-500368
EPA File Symbol or Registration Number: 19713-AAI
Product Name: PIN-DEE 3.3 EC
EPA Receipt Date: 25-Feb-2015
EPA Company Number: 19713
Company Name: DREXEL CHEMICAL COMPANY

LUZ G. CHAN
DREXEL CHEMICAL COMPANY
PO Box 13327
MEMPHIS, TN 38113-0327

SUBJECT: Receipt of Registration Application Subject to Registration Service Fee

Dear Registrant:

The Office of Pesticide Programs has received your application and certification of payment. If you submitted data with this application, the results of the PRN-2011-3 screen will be communicated separately. During the administrative screen, the Office of Pesticide Programs has determined that this Action is subject to a Pesticide Registration Service Fee as defined in the Pesticide Registration Improvement Act.

The Action has been identified as Action Code: R301

NEW PRODUCT;IDENTICAL OR SUBSTANTIALLY SIMILAR IN COMPOSITION AND USE TO A REGISTERED PRODUCT;REGISTERED SOURCE OF ACTIVE INGREDIENT;SELECTIVE DATA CITATION ONLY FOR DATA ON PRODUCT CHEMISTRY / ACUTE TOXICITY / PUBLIC HEALTH PEST EFFICACY, WHERE APPLICANT DOES NOT OWN ALL REQUIRED DATA NOR HAS AUTHORIZATION LETTER FROM DATA OWNER;

No additional payment is due at this time.

If you have any questions, please contact the Pesticide Registration Service Fee Ombudsman at (703) 347-8961.

Sincerely,
Teresa Downs
Front End Processing Staff
Information Technology & Resources Management Division

Commercial/financial information may be entitled to confidential treatment

DREXEL CHEMICAL COMPANY

DETACH AND RETAIN THIS STATEMENT
THE ATTACHED CHECK IS IN PAYMENT OF ITEMS DESCRIBED BELOW.
IF NOT CORRECT, PLEASE NOTIFY US PROMPTLY. NO RECEIPT DESIRED.

DATE	INVOICE NUMBER	DESCRIPTION	AMOUNT	DEDUCTIONS		NET AMOUNT
				PARTICULARS	AMOUNT	
02/09/15	150209	PIN-DEE 3.3	1,806.00		0.00	1,806.00

CHECK#: 331072 02/13/15 U.S. EPA CHK TOTAL: 1,806.00

THIS DOCUMENT CONTAINS A MICRO-PRINT SIGNATURE LINE, BLEED-THRU NUMBERING AND A COPY-VOID SCREEN.

FIRST TENNESSEE BANK 26-2/840

Drexel Chemical Company
P.O. BOX 13327, MEMPHIS, TENN. 38113-0327

No. 331072

EPA COMPANY NO.: 19713

*ONE THOUSAND EIGHT HUNDRED SIX AND XX / 100

PAY TO THE ORDER OF

U.S. EPA
US BANK GOVN'T LOCKBOX 979074
1005 CONVENTION PLAZA
SAINT LOUIS, MO 63197

CHECK DATE	CHECK AMOUNT
02/13/15	**********1,806.00*

DREXEL CHEMICAL COMPANY

⑈331072⑈ [redacted]

Please read instructions on reverse before comp. g form. Form Approve. MB No. 2070-0060. Approval expires 2-28-95

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☑ **Registration**
☐ **Amendment**
☐ **Other**

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
19713-XXX	Mindy Ondish (Acting)	☑ None ☐ Restricted
4. Company/Product (Name)	**PM#**	
PIN-DEE 3.3 EC	25	

5. Name and Address of Applicant *(Include ZIP Code)*

Drexel Chemical Company
P.O. Box 13327
Memphis, TN 38113-0327

☐ *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. 241-337

Product Name Prowl 3.3 EC

Section - II

☐ Amendment - Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☐ Final printed labels in repsonse to Agency letter dated _____
☑ "Me Too" Application.
☐ Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of me-too registration application. Details are in the cover letter accompanying this submission.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	☐ Metal ☑ Plastic ☐ Glass ☐ Paper ☐ Other (Specify) _____
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☑ Label ☐ Container	less than 5 gals; 5 gals. and greater	☐ On the label

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☑ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Luz G Chan	Registration Manager	(901) 774-4370

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title	
Luz G. Chan	Registration Manager	
4. Typed Name	**5. Date**	
Luz G Chan	February 23, 2015	

A Form 8570-1 (Rev. 3-94) Previous editions are obsolete. White - EPA File Copy (original) Yellow - Applicant Copy

Drexel Chemical Company

February 23, 2015

Document Processing Desk **(REGFEE)**
ATTN: Ms. Mindy Ondish, Acting PM 25
Office of Pesticide Programs (7505P)
U.S. Environmental Protection Agency
Rm S-4900, One Potomac Yard
2777 S Crystal Drive, Arlington, VA 22202

Re: Submission of Me-Too Registration Application
PIN-DEE 3.3EC (EPA File Symbol 19713-XXX)

Dear Ms. Ondish,

Please find the following in support of the above.

1. Completed EPA Form 8570-1

2. PRIA fee amounting to $1,806 for Code Action R301

3. Two copies of the proposed basic CSF and alternate CSF

4. Certification with respect to citation of data

5. Data matrix

6. Three (3) copies of the proposed label

7. Three (3) copies of the following studies:

- Manufacturing Process for Drexel Pin-Dee 3.3 EC
(OPPTS 830.1550, 830.1600, 830.1650, 830.1670, 830.1750, 830.1800)
- Physical and Chemical Characteristics of Drexel Pin-Dee 3.3 EC: Color, Physical State, Odor, Flammability, pH, Viscosity and Density
(OPPTS 830.6302, 830.6303, 830.6304, 830.6315, 830.7000, 830.7100, 830.7300)
- Physical and Chemical Characteristics of Pin-Dee 3.3EC: Storage Stability and Corrosion Characteristics
(OPPTS 830.6317 and 830.6321)

If you have questions/clarification regarding this submission, I can be reached at (901) 774-4370 or e-mail lchan@drexchem.com. Thank you.

Respectfully yours,
FOR DREXEL CHEMICAL COMPANY
Luz G. Chan
Luz G Chan
Registration Manager

1700 Channel Avenue • Post Office Box 13327 • Memphis, Tennessee 38113-0327
Phone: (901) 774-4370 • Fax: (901) 774-4666 • E-Mail: info@drexchem.com • www.DrexChem.com
SINCE 1972

Form Approv OMB No. 2070-0060. Approval Expires 5-31-98.

EPA

United States
Environmental Protection Agency
Washington, DC 20460

Formulator's Exemption Statement

(40 CFR 152.85)

Applicant's Name and Address	EPA File Symbol/Registration Number
Drexel Chemical Company P.O. Box 13327 Memphis, TN 38113-0327	19713-XXX
	Product Name PIN-DEE 3.3 EC
	Date of Confidential Statement of Formula *(EPA Form 8570-4)* 02/23/2015

As an authorized representative of the applicant for registration of the product identified above, I certify that:

(1) This product contains the following active ingredient(s):

Pendimethalin

(2) Of these, each active ingredient listed in paragraph (4) is present solely as the result of the use of that active ingredient in the manufacturing, formulation or repackaging another product which contains that active ingredient which is registered under FIFRA Section 3, is purchased by us from another producer, and is labeled for at least each use for which my product is proposed to be labeled.

(3) Indicate by checking (A) or (B) below which paragraph applies:

☑ (A) An accurate Confidential Statement of Formula *(EPA FORM 8570-4)* for the above identified product is attached to this statement. That formula statement indicates, by company name, registration number, and product name, the source of the active ingredient(s) listed in paragraph (1).

OR

☐ (B) The Confidential Statement of Formula (CSF) (EPA Form 8570-4) referenced above and on file with the EPA is complete, current, and accurate and contains the information required on the current CSF.

(4) The following active ingredients in this product qualify for the formulator's exemption.

Source

Active Ingredient	Product Name	Registration Number
Pendimethalin	[redacted]	

Product ingredient source information may be entitled to confidential treatment

Signature	Name and Title	Date
Luz G. Chan	Luz G Chan, Registration Manager	02/23/2015

U.S. GPO: 1995-386-820/20413

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

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Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address, and Telephone Number	EPA Registration Number/File Symbol
Drexel Chemical Company, P.O. Box 13327, Memphis, TN 38113-0327 (Tel 901 774-4370)	19713-AAI
Active Ingredient(s) and/or representative test compound(s) Pendimethalin	Date 03/11/2015
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) Terrestrial food and non-food crops	Product Name PIN-DEE 3.3 EC

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

Submission of me-too registration application.

SECTION I: METHOD OF DATA SUPPORT (Check one method only)

☐ I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	☑ I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).

SECTION II: GENERAL OFFER TO PAY

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☐ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

Not applicable. Data are either owned by Drexel or are beyond the 15 years compensation period.

SECTION III: CERTIFICATION

I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses .

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (I) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature	Date	Typed or Printed Name and Title
Luz G. Chan	03/11/2015	Luz G Chan, Registration Manager

EPA Form 8570-34 (9-97) Electronic and Paper versions available. Submit only Paper version.

R 300 and 301

100% identical (repack): YES or NO (circle one)
{If **yes**, it's a 100% repack - then product chemistry, acute toxicity and efficacy data are not required}

Data on Group A and B must be submitted - Group A and B can not be cited.

Guideline No.	Group A: Product Chemistry Data Study Title	Data submitted	
		Yes	No
830.1550	Product Identity & Composition	✓	
830.1600	Description of materials used to produce the product	✓	
830.1650	Description of formulation process	✓	
830.1670	Discussion on the formation of impurities	✓	
830.1700	Preliminary analysis See email NA		✓
830.1750	Certified limits (158.345)	✓	
830.1800	Enforcement analytical method	✓	

Guideline No.	Group B: Product Chemistry Data Study Title	Data submitted	
		Yes	No
830.6302	Color	✓	
830.6303	Physical State	✓	
830.6304	Odor	✓	
830.6314	Oxidation/Reduction (Chemical incompatibility) NA		✓
830.6315	Flammability	✓	
830.6316	Explodability NA		✓
830.6317	Storage stability	✓	
830.6319	Miscibility NA		✓
830.6320	Corrosion Characteristics	✓	
830.6321	Dielectric Breakdown voltage NA		✓
830.7000	pH	✓	
830.7100	Viscosity	✓	
830.7300	Density	✓	

R 300 and 301

New products must provide a bridging rationale document. The bridging document directs OPP to use a currently registered set of 6 acute toxicity data and label; instead of submitting product specific data.

Guideline No.	Acute toxicity (6 pack) Study Title	Cited	
		Yes	No
870.1100	Acute Oral (LD50)	✓	
870.1200	Acute Dermal (LD50)	✓	
870.1300	Acute Inhalation (LC50)	✓	
870.2400	Acute Eye Irritation	✓	
870.2500	Acute Dermal Irritation	✓	
870.2600	Dermal Sensitization	✓	

Efficacy – which guideline depends on the proposed label use and they must cite the data to be used for the bridging rationale.

Not Required

Guideline No.	Efficacy Study Titles	Cited		Comments
		Yes	No	
810.3100	Soil Treatments for Imported Fire Ants			
810.3200	Livestock, Poultry, Fur and Wool-Bearing Animal Treatments			
810.3300	Treatments to Control Pests of Humans and Pets			
810.3400	Mosquito, Black Fly, and Biting Midge (Sand Fly) Treatments			
810.3500	Premises Treatments			
810.3600	Structural Treatments			
810.3800	Methods for Efficacy Testing of Termite Baits			

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

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DATA MATRIX

Date February 23, 2015	EPA Reg No./File Symbol 19713-XXX	Page 1 of 3
Applicant's/Registrant's Name & Address DREXEL CHEMICAL COMPANY, P.O. BOX 13327, MEMPHIS, TN 38113-0327	Product PIN-DEE 3.3 EC	

Ingredient Pendimethalin

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.1550	Product identity and composition	TBD	Drexel Chemical Company	Own	
830.1600	Description of materials used to produce the product	TBD	Drexel Chemical Company	Own	
830.1650	Description of formulation Process	TBD	Drexel Chemical Company	Own	
830.1670	Discussion of formation of impurities	TBD	Drexel Chemical Company	Own	
830.1750	Certified Limits	-	Drexel Chemical Company	Own	See CSF
830.1800	Enforcement analytical method	TBD	Drexel Chemical Company	Own	
830.1900	Submittal of samples	-	-	-	1
830.6302	Color	TBD	Drexel Chemical Company	Own	
830.6303	Physical state	TBD	Drexel Chemical Company	Own	
830.6304	Odor	TBD	Drexel Chemical Company	Own	
830.6313	Stability to normal & elevated temperature, metal.....	-	-	-	2
830.6314	Oxidation/Reduction	-	-	-	3
830.6315	Flammability	TBD	Drexel Chemical Company	Own	
830.6316	Explodability	-		-	4
830.6317	Storage stability	TBD	Drexel Chemical Company	Own	

Signature	Name and Title	Date
Luz G. Chan	Luz G Chan, Registration Manager	02/23/2015

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

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DATA MATRIX

Date February 23, 2015	EPA Reg No./File Symbol 19713-XXX	Page 2 of 3
Applicant's/Registrant's Name & Address DREXEL CHEMICAL COMPANY, P.O. BOX 13327, MEMPHIS, TN 38113-0327	Product PIN-DEE 3.3 EC	

Ingredient Pendimethalin

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.6319	Miscibility	-	-	-	5
830.6320	Corrosion characteristics	TBD	Drexel Chemical Company	Own	
830.6321	Dielectric breakdown voltage	-	-	-	6
830.7000	pH	TBD	Drexel Chemical Company	Own	
830.7100	Viscosity	TBD	Drexel Chemical Company	Own	
830.7300	Density	TBD	Drexel Chemical Company	Own	
870.1100	Acute oral toxicity	41451904	BASF Corporation	Old	
870.1200	Acute dermal toxicity	41451905	BASF Corporation	Old	
870.1300	Acute inhalation toxicity	41451906	BASF Corporation	Old	
870.2400	Acute eye irritation	41451907	BASF Corporation	Old	
870.2500	Acute dermal irritation	41451908	BASF Corporation	Old	
870.2600	Skin sensitization	41451909	BASF Corporation	Old	

Signature	Name and Title	Date
Luz G. Chan	Luz G Chan, Registration Manager	02/23/2015

DATA MATRIX NOTES - PIN-DEE 3.3 EC (EPA File Symbol 19713-XXX)

1 **OPPTS 830.1900 Submittal of Samples:** Not required at this time.

2 **OPPTS 830.6313 Stability to normal and elevated temperatures, metals and metal ions:** Drexel would like to utilize the same results obtained from the study Storage Stability and Corrosion Characteristics (OPPTS 830.6317 & 830.6321) which was conducted at 54 $\pm$ 2°C for 14 days. Results have indicated that this product is stable at elevated temperature (i.e. 54 + 2°C). This product is not expected to come into contact with metal and metal ions.

3 **OPPTS 830.6314 Oxidation/Reduction Reaction:** Not applicable. Product does not contain an oxidizing or reducing agent.

4 **OPPTS 830.6316 Explodability:** Not applicable. Product is not potentially explosive.

5 **OPPTS 830.6319 Miscibility:** Not applicable. Product is not intended for dilution with petroleum solvents.

6 **OPPTS 830.6321 Dielectric breakdown voltage:** Not applicable. Product is not intended for use around electrical equipment.

Lingfa Chen
2/23/2015

FOR OFFICIAL USE ONLY

FILE SYMBOL	
REGISTRATION NO.	19713-AAI

CONFIDENTIAL STATEMENT OF FORMULA ENCLOSED

DATE SUBMITTED	SUBMITTED BY (✓)	
	APPLICANT	BASIC SUPPLIER
2/25/15		

Do Not Write Comments, Formula, or Parts of Formula on This Envelope

NOTE

It shall be unlawful—for any person to use for his own advantage or to reveal, other than to the Secretary, or officials or employees of the United States Department of Agriculture or other Federal agencies, or to the courts in response to a subpoena, or to physicians, and in emergencies to pharmacists and other qualified persons, for use in the preparation of antidotes, in accordance with such directions as the Secretary may prescribe, any information relative to formulas of products acquired by authority of Section 4 of the "Federal Insecticide, Fungicide, and Rodenticide Act."

Pages 82-83 Confidential Statement of Formula may be entitled to confidential treatment